Railway Age

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EDITORIAL

Railway Age

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The Importance of Heavy Car Loading

One of the factors which contributed greatly to the successful handling of the record-breaking traffic of last year was the whole-hearted support of the shipping public in loading cars more heavily and more promptly. As a result, the railways handled more traffic than ever before without any appreciable congestion or shortage of equipment. In times of heavy traffic movement it is easier to secure heavy car loading because the necessity for the most efficient utilization of equipment is apparent to all, so it is only natural that the loading of cars should decrease with the passing of the emergency and an increase in the number of idle cars. From the standpoint of the shipper it is not so necessary for him to make a special effort to load cars heavily when he knows that many are standing idle for want of business. However, it is almost, if not fully, as important from the standpoint of the railways that cars should be loaded heavily in times of light traffic as in times of heavy traffic because the cost of handling this traffic is measured primarily by the number of cars handled. Operating and traffic officers can, therefore, promote economy of operation by continuing to stress the importance of heavy loading on their shippers and by co-operating with them in every way that will encourage such loading. Not only will this practice reduce the cost to the railways of handling a given amount of business, but it will also fix the habit of heavy loading on the shippers so that less of an effort will be required to educate them to the necessity of this practice when traffic again reaches maximum proportions.

More Co-operation Nedeed

There is evidence that increased consideration is being given to the proper co-ordination of the requirements of the transportation and maintenance departments in the conduct of those operations involving the disturbance of the track structure. This has not been founded so much on the idea that some concession must be made by the operating department in the use of the track as the consideration of all phases of the problem imposed in the conduct of such operations as rail laying and ballasting in an effort to ascertain what program may be developed which will result in the minimum cost for all the operations taken together. This line of thought may well be extended to other phases of maintenance work, for example, bridge repairs and renewals. Very properly it is considered that the requirements of the operating department are paramount and that the repair work must be carried on in a manner that will involve no interference with train movement other than slow orders or the holding of a few freight trains for very short intervals. This can readily lead to an enormous increase in the cost of the work or in the development of elaborate falsework or erection methods which would be simplified greatly if the track could be turned over to the bridge forces for several hours or, if on double track, one of the tracks could be relieved of traffic for several days. However, it is not ordinarily in such cases that there is most frequent cause for criticism. The preparation of plans for such major projects is usually accompanied with estimates that can readily be made the basis of effective arguments for some concessions from the operating department. Rather it is in the minor maintenance operations such as the renewal of the floor on a turntable that the maintenance officer receives scant consideration, being frequently compelled to carry on the work with no departure whatever from the normal use of the structure on which the forces are engaged, when a little planning by those who use the table would make it readily possible for him to get in a few hours work undisturbed by train or engine movements each day. This difficulty may be ascribed in many cases to the fact that the man directly responsible for the work does not present his case with sufficient clearness or force to carry his point or because the division superintendent is too busy with other matters to give adequate time to such details. Taken by itself a case such as this is of minor importance but considering the frequency with which it may be repeated during the course of a year on a single railway system it looms large.

Miles Per Locomotive Day

The tabulation of operating statistics of the so-called $25,000,000 roads for April which appears in this issue will be found to be in slightly different form from that in which these statistics have hitherto appeared. The difference is embodied in the inclusion of the column headed "Locomotive-Miles per Locomotive-Day," which will be found to be the last column of the table in its changed arrangement. To make room for the inclusion of this column it has been necessary to omit the two columns of statistics of passenger service previously shown. Inclusion of the one in place of the other seems justified by the relatively greater importance of the data of freight locomotive performance and by the greater interest that has lately been developed in such figures. The *Railway Age* has had considerable to say about locomotive utilization, or, more particularly, about the desirability of securing more miles per day out of the motive power units. The response to our comments along these lines offers an additional reason for the inclusion of the miles per locomotive-day statistics. The two pages of operating statistics which appear in the *Railway Age* each month are selected from a tabulation issued by the Bureau of Statistics of the Interstate Commerce Commission. The figures are reported by the railroads to the commission on the O. S. forms. The comments that have appeared in the *Railway Age* on this subject have, in each case, referred to figures of locomotive-miles per locomotive-day *excluding unserviceable and stored engines.* The figure reported on the O. S. forms is different from this because it includes *all* locomotives. This means, of course, that the data found in the tabulation of operating statistics is not the same as has been referred to in the editorials on the subject of locomotive utilization. The Interstate Commerce Commission is now considering the revision of its O. S. forms, the changes being principally in the form of amplification of certain of the data. Among other things, it is proposed in the revision to retain the present unit of locomotive-miles per locomotive-day but to add to it also the other unit of locomotive-miles per locomotive-day excluding unserviceable and stored locomotives. Inclusion of the new

figure will represent a desirable change, but until decision is made to include it we shall have to be content, insofar as concerns the tabulation of monthly averages, with figures compiled on the present basis alone—in other words, with figures that, in a measure, tell only one-half the whole story of locomotive utilization so far as it is reflected in the miles per locomotive-day.

Pride and Humility; Both Wrong

"The customer is always right." This dictum of a certain railroad president, quoted recently in these columns, means that we must assume that the customer is right, at the opening of the conversation, even though there be a possibility that his position may turn out to be wrong. In other words, this maxim is a call to be a first-class diplomat. The customer may insist on having something that is unattainable, and the interview with him becomes a test of the brakeman's ability to keep his temper. Keeping serene is largely a matter of habit. Some people—some trainmen—seem to smile naturally; they do not have to cultivate the habit. *The rest of us have got to imitate them.* The trainman who is too proud to imitate a fellow-trainman who, perhaps, he looks upon as in some respects his inferior, should quickly lay aside that pride. If the man is superior in politeness, it matters not whether he is or is not inferior in some other element of efficiency. This thought comes to mind on reading another newspaper quotation from a railroad president, which is as follows:

> There is no man within our organization who is too big to say "If you please," "Good morning," "Thank you," or "Good evening" to passengers on the train and to visitors in the offices. It gives a human touch—the atmosphere of personal relations which the road is trying to maintain and increase.

"Too big" means, we suppose, pride of position. To what extent this fault figures in the behavior of trainmen and station men we do not know. Possibly that president had in mind a fault which is often(?)times observable in the conduct of employees (some of whom do not have much to do with passengers) toward other employees. Another thing: considering only average trainmen and station men it is desirable to issue a caution against feeling too little as well as against feeling too big. They do not call it humility—a feeling of littleness—but is not that the real condition? Trainmen may often be observed giving inadequate answers—even keeping absolutely silent—because they do not feel equal to maintaining so much as a two-minute conversation with a passenger who is manifestly their intellectual superior. The trainman feels that he is not hired to be a "highbrow," and thus excuses himself. But he *is* hired for just that! At least, to the extent of giving wholly adequate answers to highbrow passengers. A passenger train may be made a great school of training for higher positions.

Railway Consolidation Progress

It seems to be a feature of the progress towards railway consolidations that such advancement to that end as occurs, takes place somewhat in the form of a cycle. There are periods of comparative quiet interrupted from time to time by periods of considerable activity. Such a period of activity has occurred during the past week or two. In this time there have been no less than five developments of outstanding importance. One is the approval by the Interstate Commerce Commission of the purchase of the International—Great Northern by the Gulf Coast Lines. The second is the similar sanction for the leasing of the Carolina, Clinchfield & Ohio by the Louisville & Nashville and the Atlantic Coast Line. The third is the approval of the acquisition by the Missouri Pacific of one-half of the common stock of the Denver & Rio Grande Western. The fourth is the announcement that the Southern Pacific and the El Paso & Southwestern will ask for authority for consolidation. The fifth development is the statement in the Republican platform in favor of the consolidation of railways. Of these various developments, presumably those of greatest importance are such as relate to the manner in which the Missouri Pacific, in its new position of revived prosperity and restored favorable strategic position, is rapidly rebuilding its system of controlled lines. The Missouri Pacific has now received sanction, as noted, to take over one-half of the common stock of the D. & R. G. W. The pending reorganization of the Texas & Pacific will restore that property to Missouri Pacific control and the Missouri Pacific will purchase a controlling interest in the Gulf Coast Lines which itself has approval to take over the I-GN. This combination of lines, except as concerns the D. & R. G. W., forms a substantial part of the Chicago-Missouri Pacific System or System No. 19 of the Interstate Commerce Commission's tentative plan of railway consolidations, which means that this particular system has, within a comparatively short time, been brought well on the way to accomplishment. Time only will determine the importance of the statement in the Republican platform in favor of railway consolidation. The inclusion of the statement in the platform does do one thing and that is to sanction the consolidation provisions of the Transportation Act, with reference to the desirability for consolidation with regulatory supervision. It is becoming more and more evident as time goes on that consolidations are a natural development and that nothing was more needed to bring them about than the removal of the stigma that attached them under the provisions of the Sherman Anti-Trust Law and the court decisions relating thereto.

The Railway Labor Unions as a Political Machine

THE POLITICAL ACTIVITIES of the leaders of the railway labor organizations interest us greatly. They might well interest the members of the labor unions more and also the people of the nation. Formerly the railway labor unions were trade unions in the generally accepted sense. They existed to get higher wages and more favorable working conditions for their members by making demands upon and negotiating with the railway managements, and, if necessary, by conducting strikes. They also sought legislation by the state legislatures and Congress, but it was almost always legislation directly affecting the conditions under which the employees worked.

Then came a change. Perhaps it began when the train service brotherhoods succeeded in getting the "eight-hour basic day" by the passage of the Adamson Act. We think, however, it really began under government control. The heads of the labor unions, immediately W. G. McAdoo became director-general, found themselves persons of great political consequence. Evidently Mr. McAdoo wanted the votes of the two million railway employees and thought the best way to get them was by winning the support of the heads of the organizations. At any rate, the railway labor organizations have been getting more and more into politics ever since. They are now well on the way to becoming a great national political machine, instead of real trade unions. One of the most significant features of the situation is that the labor leaders are conducting themselves in a way that would win the envy of the most autocratic political boss that ever lived.

Apparently they decide the political policies of the organizations and the candidates for whom the members shall vote

without making even a pretense of submitting these important matters to the consideration of the members.

Before government control the sentiment of railway labor leaders and railway employees apparently was almost unanimously opposed to government ownership. A short time before the termination of government control the railway labor leaders announced the Plumb Plan of government ownership. They appeared before committees of Congress in favor of it, purporting in its advocacy to represent the unions. Had they ever submitted the Plumb Plan to the members of the unions? We never heard of it if they did. They committed the unions to the support of an important political policy, which was the exact opposite of the policy they and railway employees had previously favored and did this apparently without submitting the matter to the members in any way whatever. We doubt if there ever was a case in American history when a professional political boss acted so autocratically and undemocratically, yet the labor leaders "got away with it."

Since that time the labor leaders have been carrying on an expensive and extensive propaganda for the destruction of private ownership. There is a class of radical politicians composed of such men as LaFollette, Brookhart, Magnus Johnson, Shipstead and Dill, who constantly advocate wholesale reductions of railway rates ostensibly in the interest of the farmers. A substantial immediate reduction of rates without a corresponding reduction of the wages of railway employees would bankrupt the railroad industry. Nevertheless, the leaders of the railway labor unions have actively supported these men and urged the members of the unions to vote for them. Every railway employee who votes for one of them votes for a policy which would result either in a reduction of his wages or in the bankruptcy of the railroads and government ownership. Do the railway labor leaders ever have their political policies and activities formally approved by vote of their members? If they do, they never take the public into their confidence regarding the matter. All appearances indicate that they adopt their political policies and engage in their political activities entirely without the previous approval of their members.

Recently there have appeared to be some differences of opinion regarding matters political among the railway labor leaders. On June 17 Timothy Healy, international president of the Brotherhood of Firemen and Oilers, gave out a statement from the headquarters of W. G. McAdoo at New York, in which he said, "The railroads which are opposed to organized labor are determined to beat Mr. McAdoo, a friend of the railroad workers, for the Democratic presidential nomination." The *Railway Age* is fairly well informed regarding the activities of the railroads, and we can say emphatically that the railroads are not opposing the nomination of Mr. McAdoo, although some railway officers who happen to be democrats may be doing so. The true significance of Timothy's statement is that it was given out from the McAdoo political headquarters. Recently Warren S. Stone, grand chief of the Brotherhood of Locomotive Engineers, gave out a statement advocating the election of Senator La Follette as president, and according to the newspaper reports, indicating that railway employees would support him. This was countered by L. E. Shepard, president of the Order of Railway Conductors, who gave out an interview indicating that railway employees had not yet decided whom they would support.

Regardless of these apparent differences between the railway labor leaders, it is certain when the so-called "Progressive" conference meets in Cleveland on July 4 several of the railway labor leaders will be found there sitting in the seats of the mighty and that the deliberations of the conference will be largely dominated by these railway labor leaders. The way things are done by the "Progressive" group is illustrated by a statement to the press that has been issued by the "Progressive Publicity Bureau of the Conference for Progressive Political Action." With reference to the conference to be held at Cleveland on July 4, this statement says among other things: "We stand for the repeal of the Esch-Cummins Act and for public ownership of railroads with democratic operation." "Democratic operation" is of course a euphonism for the Plumb Plan. In other words, weeks before the conference a statement is issued by the Publicity Bureau of the Conference, stating what it is going to favor. Why hold the conference then? Perhaps only to nominate candidates. Are not persons who announce themselves for "democratic operation" of the railways, but who weeks before their conference is to be held publicly announce what the delegates to the conference are going to favor, somewhat lacking in a sense of humor?

The important feature of the situation from the standpoint of railway employees and the public is that railway labor leaders, apparently without in any way submitting the great questions involved to a referendum of their members, presume to commit the unions to political policies and activities which, if successful, would demoralize the entire railroad industry, temporarily, at least; throw hundreds of thousands of railway employees out of work and finally result in government ownership; and that they even say for what political candidates the members of the unions will vote.

It is hardly necessary to intimate that if the railway labor unions are to become primarily a political machine, they will finally array against themselves every political element that is opposed to class rule in the United States. Can the labor leaders "get away with it?" Are the members of the unions so devoid of political opinions and inclinations of their own, and the heads of the unions such complete autocrats, that the latter can absolutely dictate the policies their members will favor and the candidates for whom they shall vote? If so, there has appeared a new phenomenon in the politics of the United States.

New Accounting Classification Will Suffer from Haste

I

THE PROPOSED REVISION of the I. C. C. classification of operating expenses does not seem to have made the amount of progress that was hoped for.

The discussion of such revision has centered chiefly around the plan offered for discussion last November by the Bureau of Accounts of the Interstate Commerce Commission. This plan embodies several important changes. It reduces the number of primary accounts quite substantially. It endeavors to eliminate, insofar as possible, the necessity that exists in the present accounts of pro-rating over the primary accounts expenses originally charged to clearing accounts, such as "Shop Expenses," "Store Expenses," etc. Third, it proposes separation of the primary accounts as between labor, material and miscellaneous. Finally, it rearranges the general accounts with a view to putting them more in line with the departments into which the railway organization is divided.

The proposed classification has not been received with unmixed favor. The Railway Accounting Officers Association, through its general accounts committee, has voted in opposition to it. This committee has, moreover, offered a tentative classification of its own which likewise contains fewer primary accounts than the present classification and which similarly attempts to eliminate the necessity of prorating amounts charged originally to clearing accounts. Its revision, however, does not call for separation of the pri-

mary accounts as between labor, material and miscellaneous. Most important of all is its retention of the present general accounts. Practically all the changes suggested in this revision relate to the primary accounts. The content of the general accounts will, except for certain minor details, be the same as in the classification at present in effect.

Of all the reasons offered in opposition to the classification proposed by the Bureau of Accounts, the most important relates to the disturbance of comparability due to the rearrangement of the general accounts and the content thereof. It is alleged that it would be extremely difficult to compare performance as reflected in the figures of the new classification with performance as reported in the figures of the present classification. Those who give less importance to the necessity for comparability point out, of course, that comparison with past performance, as it has been permitted in the past five or six years, has many drawbacks. The varying wage scales, the wide fluctuations in prices of materials, the marked variations in traffic volume as the result of strikes or sharp changes in the trend of business as well as marked differences in operating efficiency are held by these people to have so disturbed usual relationships as almost entirely to have vitiated the normal value of comparability.

Notwithstanding these conditions, the fact remains, nevertheless, that there is value in comparison. Every railroad officer checks the excellence of his present performance by comparing it with his past performance. In practically all cases the comparison is between the results of a certain period this year with those of the same period of last year. The value of such methods of comparison has certain limitations because the conditions of "last year" may have been exceptional. It would probably be better to work out some kind of an average of results in various preceding years and to set up some kind of an index in the form of an average covering a sufficient period of time so that in it unusually favorable or unusually unfavorable factors might be averaged out. Ordinarily, however, it is not deemed necessary to go to so much trouble as this. In some few cases such averages are worked out. It has always been somewhat of a question to many people why more advantage was not taken of the "test period" averages, covering the three years ended June 30, 1917. These averages were made up for the purpose of figuring the standard return during the period of federal control and later used in great detail in connection with the settlements for the federal control and the guaranty periods. Presumably many will remark that conditions during and after the federal control period were so different from those existing previously thereto that comparison of the one with the other would have proved fruitless for purposes of management control. The idea of an average period or test period with which to compare present operations, however, has merit and has thus far offered a neglected opportunity.

The *Railway Age* sometime ago put itself on record in connection with this matter. It expressed its belief that comparability had great value but that comparability is not the most important object to be attained in any new classification. It expressed the view that the savings in clerical expense or increased utility for purposes of management control were not sufficient to compensate for the loss of comparability which would result from the adoption of the new classification.

There might be expected to be two major reasons for a revision of the classification of operating expenses at this time —the desire to save money, and the desire so to improve the arrangement of the accounts that they would prove of greater utility to the railway managements and the Interstate Commerce Commission. The managements want figures that best serve the purpose of management control. The Interstate Commerce Commission needs the data in the form that will best assist that body in its new duties of analyzing the economy and efficiency of operation in accordance with the provisions of section 15-a.

It would be a fair question whether it has not been the desire to reduce accounting expense rather than the desire to formulate a more useful system of accounts that has been uppermost in the minds of those who have prepared the proposed revision of the operating expenses classification. The desire to reduce expense is a worthy ambition and, other things being equal, should properly receive all the encouragement in the world. The question might be, however, as to what is most necessary to reduce, the accounting expenses or the operating expenses generally. The point is that the data supplied by the figures of operating expenses tabulated in accordance with the accounting classification are intended principally for purposes of management control of operating expenses. The aim of the classification should first be to put the figures in that form in which they will prove of greatest use and second to do this thing within due limits of expense. The accounting expense should in the last analysis be a secondary consideration rather than a primary one.

There is another side to this matter of the savings in accounting expense. It is a safe argument that comparisons between the present and past will be demanded by executives, boards of directors and certainly by the banks and other fiduciary institutions. Will not this cause a necessity of much special analysis or investigation to relate the figures in the new classification with those of the old, the cost of which will largely counteract such initial savings as may result from the new arrangement of the accounts?

Books and Special Articles of Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

Books and Pamphlets

All About Our British Railways, by G. G. Jackson. A well-illustrated, non-technical book on the history and present-day aspects of British railroads for the general reader. 288 p. Published by T. C. and E. C. Jack, London, Eng.

The Genius of American Business, by Julius H. Barnes. Chapter 11 is on Transportation. 154 p. Pub. by Doubleday, Page & Co., Garden City, N. Y. $1.00.

A History of Minnesota, Vol. 2, by William W. Folwell. Land grants, early railroads and early railroad projects and their fates, from 1857-1865, Map, "Railroad situation, 1857-1862," p. 38. 477 p. Published by Minnesota Historical Society, St. Paul, Minn.

The Interstate Commerce Act, by Karl Knox Gartner. An elementary treatise, with references and citations. 262 p. Pub. by LaSalle Extension University, Chicago, Ill. $2.50.

The Nation's Basic Industries and Commodity Index Taken From Moody's Industrial Rating Book 1924. Seasonal averages of railroad earnings, operating ratios, and census of railroad repair shops are included, as well as a section of definitions of commodities and articles for which statistics are given. 172 p. Published by Moody's Investors Service, New York City.

Periodical Articles

Are Labor Banks Only for Banking? So Far They Have Been Conservatively Managed. A survey of the brotherhood and other labor banks. Barron's, June 16, 1924, p. 11.

Our Wealth and Savings to 1924, by Walter Renton Ingalls. A railway labor index, capital savings, including "railway improvements, and wealth in 'railways,' privately owned railroad cars," etc., are included. Annalist, June 16, 1924, p. 685-688.

Competition on Co-operation a Great Success

The 372 Contestants Represent a Comprehensive Cross-Section of the Railway World

E. K. Hall

Dr. H. C. Metcalf

THE *Railway Age* competition on "The Best Methods for Bringing About Co-operation Between Railways and Their Employees to Promote Efficiency," which closed on April 15, proved to be extraordinarily successful, both as to the large number of contributors and the constructive value of the suggestions which came from all over the railway field. So far as we know, only one other competition in the railway world has drawn forth a larger number of contributions. The competition on fuel conservation held by the International Railway Fuel Association last year was participated in by 2,028 people.

There were 372 contributors to the *Railway Age* competition, but without doubt this number, although smaller than that of the above mentioned competition, represented a much greater range and variety of viewpoints. This is not to be wondered at when we review the events of recent years, including the developments in the relations between the workers and the managements, the seriousness at times of the situation from the standpoint of handling the traffic which was offered to the railways, and the overcoming of handicaps imposed by restrictive regulation and working agreements.

The interesting thing is that the contributions, representing almost every interest on a railroad and coming from men with widely diverse points of view—from the ultra conservative to the extreme radical—had many things in common; this, because they were all aiming toward the same goal—that of suggesting in a constructive way how to secure a greater degree of co-operation between employees and managements, in order to improve the efficiency and economy of railroad operation and thus give better service to the public. It is true that many of the contributions showed a certain bias—often apparently unconscious—depending upon the viewpoint of the writer; but on the other hand, there was a more or less close agreement on many things of fundamental importance.

We are keenly appreciative of the very frank way in which many of the writers opened up their minds and made constructive suggestions to overcome difficulties which are hampering the development of that degree of co-operation which is quite essential if the railroads are to prosper and the public is to benefit from improved service. In fact, this has greatly enhanced the value of the competition. Shortcomings on the part of both the managements and the men are clearly pointed out and frankly discussed. Such contributions, taken in conjunction with those from men who were more careful in approaching the subject, present a picture which is fairly complete and should be of the greatest value to all of those who are interested in improving the conditions. While the great volume of the contributions will prevent presenting a comprehensive picture of this entire situation at one time, we hope during the coming months to publish a sufficient number of the articles, or symposiums based upon the articles, to give our readers the benefit of this really remarkable collection of manuscripts.

Where the Manuscripts Came From

The contributions came from 62 railroads in the United States; at least that many can be identified, since a few of the contributors failed to give us information about their railroad connection. There were five contributions from Canada and one from Mexico. There were in addition a considerable number from non-railroaders.

Professor Walter Rautenstrauch

Among the 62 railroads there were 10 from which 10 or more articles were received. These are the Pennsylvania, 44; Southern Pacific, 42; New York, New Haven & Hartford, 35; Central of Georgia, 25; Chicago, Burlington & Quincy, 19; Oregon Short Line, 18; Chesapeake & Ohio, 14; Union Pacific, 12;

Nashville, Chattanooga & St. Louis, 11, and Northern Pacific, 10.

The distribution was even more extensive when considered from a geographical point of view. Contributions were received from all of the states in the Union—including the District of Columbia—with the exception of the states of Louisiana, Michigan, South Carolina and South Dakota. Four provinces in Canada were also represented, as well as one of the states in Mexico. Ten or more contributions were received from 12 of the 44 states, California leading with 36 contributions, followed by Pennsylvania with 34; Georgia, 27; New York, 23; Connecticut, 18; Idaho, 19; Massachusetts, 16; Nebraska, 16; Ohio, 13; Virginia, 13; Minnesota, 12, and New Jersey, 10.

The really remarkable fact, however, is that the 372 contributions represented 223 different towns and cities. Eleven cities had five or more contributors. Macon, Ga.; Pocatello, Idaho, and New York City each had 14; New Haven, Conn., and Philadelphia, Pa., had eight each; San Francisco, seven; Atlanta, Ga., and Richmond, Va., six each; and Los Angeles, Cal., Boston, Mass., and Salt Lake City, Utah, five each.

The real revelation comes, however, when it is learned that the 372 contributors included 183 different titles or occupations, covering the entire railroad field and coming from every important department. The titles and occupations represent a pretty fair cross-section of the railway world—from a member of the board of directors of a railroad, down to the ranks, including stenographers, a coach cleaner, an engine wiper, laborers, helpers, apprentices, etc. There were about 25 contributions from non-railroaders, or from writers whose exact relationship to the railroads could not be determined. The non-railroaders included an economist, editor, farmer, journalist, postal employee, Railroad Y. M. C. A. secretaries, students, etc.

Included among those whom we listed as railway employees were a number of official representatives of the labor unions and company unions. With such a large number of titles and occupations represented, it can readily be recognized that any one group could not be very large. As a matter of fact, the station agents led off with 21 contributions and were followed by the conductors with 15 and machinists with 12. Included among the contributors were three women—the wife of an agent, an agent and a stenographer.

Types of Manuscripts

Naturally, the different writers approached their subjects and handled them in a great variety of ways. There are short, concise statements of facts and brief suggestions as to how to improve conditions. At the other extreme are long, carefully prepared and comprehensive treatises. The articles extended in length all the way from 30 words, or thereabouts, to several thousand words. One manuscript is in dialogue or story form; one man attempted to make his point by means of a cartoon; others preferred to develop their points in the form of catechisms. There are numerous extracts from poems; quite a fair percentage of the papers refer to the Golden Rule, and there are many quotations from the Scriptures. One article is in the form of a doctor's diagnosis and prescription. Some of the articles are written in the very best of English, while others, almost as forceful, are more crudely written. One manuscript was in a foreign language and we had to employ the services of a translator.

We have, of course, no knowledge as to the age of the youngest contributor, but we have an idea that the oldest contributor is one who confesses to 52 years of railway experience.

Selection of Judges

The problem of selecting judges for the competition was most difficult. There were a great many men in the railroad field whom we should have liked to have called upon; on the other hand, the contributions came from almost every conceivable source in the railroad world and while they are all aimed at the single goal of bringing about co-operation, they represent a great variety of viewpoints. There was a serious question, therefore, as to whether judges selected from within the railroad field would be in general satisfactory to the railroad world at large, considering the divergent viewpoints of the many elements involved.

Because of this we decided to go entirely outside of the railroad field for the judges and to select them with two or three fundmental principles in mind. First, they should have a reputation for their knowledge of the management problem, and must be men who had thought through the question and who could not be charged with being superficial, or ignorant as to questions of industrial economics. Second, these men should not only be known because of their deep thinking and knowledge of management, but they must have had some experience directly or in an intimate advisory capacity in successfully applying the principles of management. These qualifications limited the field within which satisfactory judges could be obtained, and in a way made it much easier to locate them.

The judges are Edward K. Hall, vice-president in charge of public relations and personnel of the American Telephone & Telegraph Company; Dr. Henry C. Metcalf, director of the Bureau of Personnel Administration, and Prof. Walter Rautenstrauch of Columbia University.

Edward K. Hall

Edward Kimball Hall is vice-president of the American Telephone & Telegraph Company, with special relationship to the department dealing with public relations and personnel. He has made a remarkable success of this work. In the words of one of his friends, "he is widely known as an authority on civic matters and on business and public relations. He has a personality which inspires co-operation and loyalty. He enters with zeal and enthusiasm into anything which he undertakes, and is sincere, frank and honest in his approach to a problem. In brief, he applies good judgment and common sense to matters which he undertakes. He is fair-minded and seeks to understand the other man's point of view." An insight into Mr. Hall's personality may be obtained from the closing words of an address which he made before the New York Railroad Club in February, 1923.

"We believe in making every man feel he is an important member of the family. We intend to help him get interested in his job, believe in his boss, swear by the company he is a part of, know what its policies are and why they are adopted, and know what the rules are and why they are made, and appreciate the part he plays in the organization; like it; like the whole outfit. If we could get all workers in that frame of mind we should have such peace in industry as we have never dreamed of, and production unprecedented.

"May I say this to you? If we could get the whole-hearted co-operation, respect and belief of all the people concerned with communication and transportation, we would be doing this country a greater service than we are when we are giving the services of transportation and communication, even. If we could bring that about it would have a wonderful effect; it would steady the situation, and the industrial problem would be on its way to a solution. You are the biggest industry by far in the United States. If you could find the answer along these lines, why, everybody else would give it a trial. I wish you God-speed and hope you will find the way and get it across just as quickly as human energy and resourcefulness can bring it about."

Mr. Hall was born in Greenville, Ill., in 1870, and began life as a lawyer, coming into the telephone field through a long established legal connection with one of the telephone companies. He is a graduate of Dartmouth College and Harvard Law School. He has always taken a great interest in Dartmouth and upon the resignation of Ernest Fox

Nichols, he was offered the presidency of that institution.

Mr. Hall gained a very practical knowledge of the telephone business during the 10 years when he was attorney for the New England Telephone & Telegraph Company. He came to New York to become vice-president of the Electric Bond & Share Company, January 1, 1917; this gave him a better understanding of the financial side of public utilities. In September, 1919, he became a vice-president of the American Telephone & Telegraph Company. He was active while he was in New England in the Boston Chamber of Commerce and during the war acted on the Committee on National Public Utility Conditions, and later served in the War Department as business director of the Student Army Training Corps.

Dr. Henry C. Metcalf

Doctor Henry C. Metcalf is characterized by one who knows him well as being "eminently successful in humanizing economics;" by another, "as an interesting combination of idealist and practical go-getter when it comes to applying sound principles. He is keen, intense and tremendously stimulating to those with whom he comes in contact, absolutely intellectually honest and a man of charming personality. He is a teacher at heart and happiest when he is helping others to think sympathetically and soundly about the individual relationships in industry."

When this country entered the World War and it became necessary in speeding up production to provide intensive courses in management for men in supervisory positions, Doctor Metcalf was called by the government to the directorship of the war emergency training courses in employment management at Columbia University and the Carnegie Institute of Technology. For a short time after leaving the service he was associated with the Bureau of Municipal Research, New York City, and then with the Bureau of Industrial Research. He is co-author with Ordway Tead of the book on "Personnel Administration, Its Principles and Practices," a standard and highly regarded work on this subject. Since 1920 he has been director of the Bureau of Personnel Administration of New York City. Briefly, this organization cooperates with the employer, the employee and the public in the investigation and advancement of the fundamental human values that underlie all labor relations. Its method is fourfold; it trains men and women in the science and art of personnel administration, it makes labor analyses, it acts as a placement bureau and it furnishes vital information on personnel administration. Doctor Metcalf is also a lecturer on personnel administration in New York University, Teachers College, Columbia University, New Rochelle College and the Katharine Gibbs Executive Secretarial School.

Dr. Henry C. Metcalf was born at Warsaw, Ill., and is a graduate of Harvard College. He attended the Sorbonne and the School of Economics and Political Science at Paris, and received his doctor's degree from the University of Berlin. He was the head of the Department of Economics at Tufts College for 15 years or more, giving about half of his time, however, during that period to work in connection with management and personnel questions in industrial plants. His experience since leaving Dartmouth has already been mentioned.

Prof. Walter Rautenstrauch

Walter Rautenstrauch is professor of industrial engineering at Columbia University, and in that relationship necessarily has given much thought and attention to management problems. In addition to this, he has been closely related to industrial undertakings and in this connection has had ample opportunity to test out the principles of management in a most practical way. He has exceptional ability in analyzing situations or problems, at the same time bringing to bear a splendid spirit of tolerance and sympathy. He is an interesting combination of a keen technical analyst, with a delightful sense of humor and a fine Christian character. Needless to say he has had great success in dealing with students; he has been equally successful as an industrial executive.

Professor Rautenstrauch was born at Sedalia, Mo., in 1880, and was graduated from the University of Missouri in 1902. He received his master's degree from the University of Maine in 1903. He was assistant professor at Cornell University from 1904 to 1906 and since that time has been connected with Columbia University as professor of mechanical engineering, and more recently as professor of industrial engineering. As indicated above, he has been associated with several industrial undertakings coincident with his university work. For instance, at present he is vice-president and general manager of the Liberty Yeast Corporation, which has factories in Cambridge, Mass., Baltimore, Md., Pekin, Ill., Long Island City, N. Y., and Chicago. He is also president of Metalastic, Inc., a company which makes locomotive and engine packings and has a factory at Jersey City, N. J. He is a consulting engineer associated with Sanderson & Porter and is a director of the Hudson Insurance Company. Professor Rautenstrauch, unlike the other two judges, has had some railroad experience, having been a machinist and car carpenter for the Missouri, Kansas & Texas, and a draftsman with the Standard Steel Car Company.

It will be seen that the judges not only have thought through many of the problems of management, but in every instance have had an opportunity to apply their ideas and test them in a practical way. It is not at all surprising to find that all of them are men of large hearts, broad minds and high ideals. All of them have a keen sympathy for their fellows and are dominated by the best of Christian motives. This in a way was very noticeable in the discussions preceding the selection of the prize winners. Quite naturally, different types of papers made different appeals to them and when the "cards were first laid on the table" it was found that the judges were a unit as to the basis upon which the awards should be made, but that they were not at all agreed as to the papers which should come first. It was a liberal education in the art of management to listen to the debates which followed and to see the wonderful spirit which was exercised in adjusting differences of points of view and in coming to a common conclusion. Eventually the vote was unanimous as to both the first and second prizes. It is only fair to say that there were several other papers which received consideration for these two places and were eliminated only after very critical analysis and discussion.

The announcement of the prize awards and the first prize article will be published in next week's issue of the *Railway Age*.

Southern Pacific Opens Modern Ticket Office at San Francisco

The Southern Pacific has recently opened a new city ticket office at 65 Geary street, San Francisco, Cal., which includes a number of innovations. Contrary to common practice no private offices are provided for the district passenger agent and the agent in charge of the office but these men are located within a neatly railed enclosure just inside of and on each side of the main entrance, where patrons can locate them easily and without formality. At the head of the counter on the right as one enters is a travel bureau, and at the left a resort information bureau, each in charge of an experienced man.

The ticket counter is provided with a superstructure 13½ in. high with openings for ticket windows 22 in. wide, spaced 3 ft., 3½ in. apart. Each counter is equipped with two complete cash drawers so that the relief of one ticket clerk by

another is made quickly. The rear of the counter is equipped with a ticket case having a sliding curtain to protect the stock. This case is lighted electrically with finger fixtures which are located at the top of the case in the center, and which throw the light directly down on the stock. Long one-point coupon tickets are kept in drawers conveniently located to the right and left of the salesman, in which interline coupon forms for most frequently used routes and destinations also are provided. In case the destination and routing necessitate building up a ticket, the salesman makes out a written order, giving the description of the route, the rate, etc., and sends this order in a pneumatic tube which is located immediately back of him, to the ticket maker's room in the rear of the office, where a corps of ticket makers are employed. These men make up the tickets, check the routes and rates quoted, and return them to the salesman through the pneumatic tube system. A double dater, which shows the date of sale and the date of expiration, is provided with a die for the initial of the ticket seller. The die plate is removable and interchangeable so that when a clerk goes off duty he removes his die plate and locks it in his cash drawer. This method protects each ticket salesman and provides a check on all sales. Ten different stocks of tickets are used, of which each set is designated with the same initial as the salesman, thereby permitting an additional check on all sales.

Tubes Used Between Counter and Ticket Maker in Rear

Office Contains Ample Floor Space

Charts for all Pullman reservations in San Francisco are located on the mazzanine floor of the office. Each salesman is provided with a direct telephone to the Pullman bureau. The Pullman chart room is an innovation in that it serves all Pullman operations in San Francisco, Oakland, Alameda and Berkeley with direct telephone connections from all stations east and north of San Francisco to Sacramento, and south over the Southern Pacific and Atchison, Topeka & Santa Fe to Los Angeles, thereby enabling all stations in this area to get immediate and direct service, without telegraphing or writing. Five men handle the Pullman board. Diagrams for trains for one month in advance are arranged in train and date order on revolving racks in front of the men. As ticket salesmen phone in for space, a Pullman chart man immediately gives him the number of the berth or reservation, and marks the ticket number on the diagram. Charts for all trains for the coming month are kept in a rack above the board and are filed in the order of their dates. A large portion of the work of the Pullman chart room consists of making reservations for points beyond destinations of through trains.

Ticket Counters Arranged to Avoid Tedious Delays to Patrons

A bureau has been established in the new ticket office to give prompt telephone information to patrons in San Francisco and its environs. This is manned by four travel experts with a completely arranged library of travel information, located conveniently so that any ordinary question can be answered immediately. The library consists of all Southern Pacific joint and local tariffs, general rate sheets of principal lines, various pamphlets and publications of different chambers of commerce with reference to special points of interest at various cities and hotel rates. In cases where the information requested is too complicated to be handled by telephone, the clerk secures the name and address of the party making the inquiry, and turns it over to the district passenger agent who instructs a representative to call on the prospect and assist him in every way possible. The bureau is open every day, including Sundays and holidays from 7:30 a. m. to 10:30 p. m. After 10:30 p. m. inquiries are handled by the clerks at the Ferry and Third Street stations.

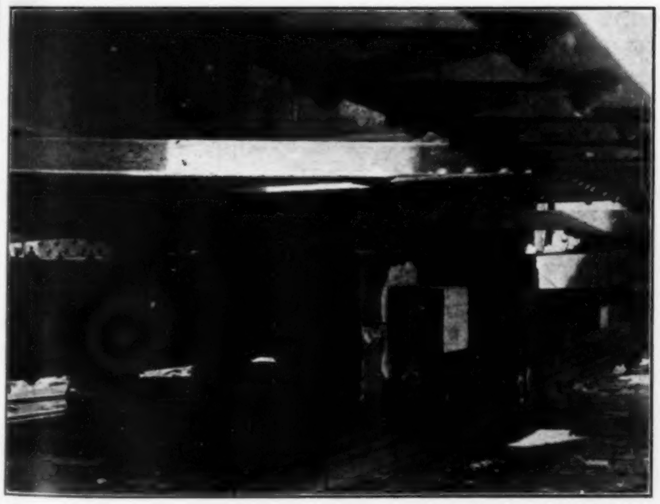
The Canadian National has made arrangements with station CECA, Toronto, Ont., to send out radio programs. The company now has radio stations in Montreal, Que.; Ottawa, Ont.; Toronto; Winnipeg, Man.; Regina, Sask.; Saskatoon, Edmonton, Alta., and Calgary.

The Portable Frame Trestles Were Set at 10:10 a. m.

A Remarkable Record in a Turntable Renewal

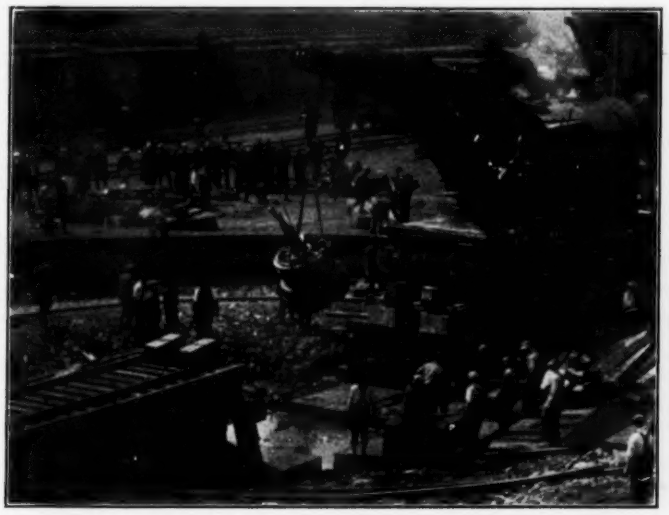
Southern Pacific Bridge Crews Replace 70-ft. Structure With 100-ft. in 1 Hr. 46 Min.

THE REPLACEMENT of an old 35-ton, 70-ft. deck girder turntable by a 90-ton, 100-ft. half-through truss table in 1 hr. 46 min. is the record made by the Southern Pacific on April 15 at Roseburg, Ore. The work successfully tested the accuracy of engineers and the efficiency of three bridge crews. There was absolutely no delay to traffic or to the turning of engines, and the new table was put into continuous use immediately after the first engine had been turned.



The New Table Was Set on a Four-Axle Carriage

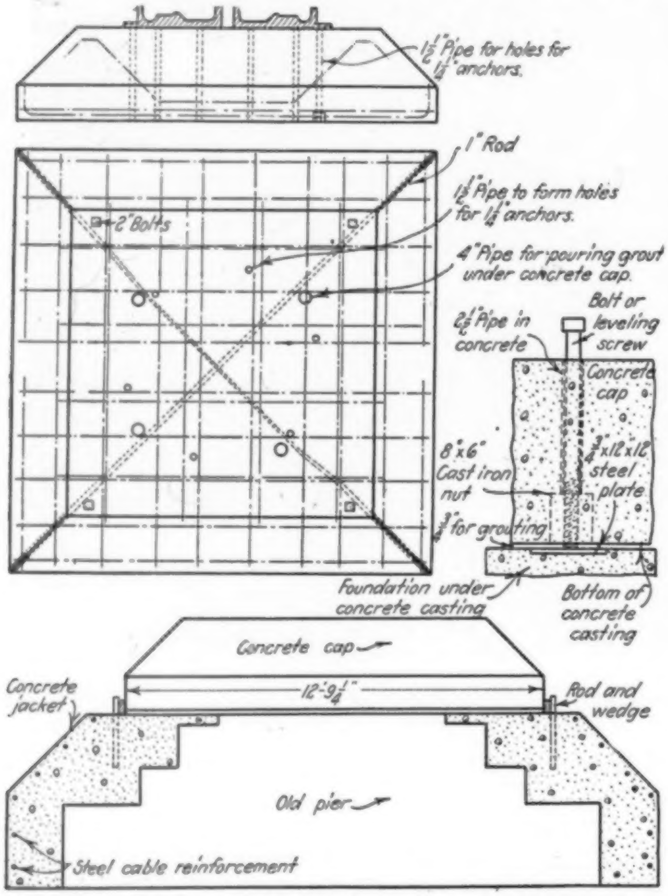
Work preliminary to the actual placement of the new table consisted of enlarging the 70-ft. pit to the 100-ft. diameter, cribbing the radial tracks to permit continuous use of the old table and the building of a new concrete circle wall on cedar piles in segments with V-shaped expansion joints. One segment of the wall was left open to permit the shifting in of the new turntable which was built on a carriage alongside of the pit. The foundation pier of the old table was enlarged with a concrete jacket having a 12-in. by 12-in. steel plate set flush with the top surface near each corner. A new pre-cast concrete center cap was built in order to provide sufficient bearing for the increased load of the new table. This cap was also built alongside of the turntable so as not to interfere with the operation of the old table previous to actual replacement. Extreme care was exercised in securing the exact dimensions for this block so as to obtain the correct height when it was attached to the center casting with through bolts. Holes were provided in the cap through which to force grout after it had been placed on the pier.



The Old Center Was Raised 10:14½ a. m.

Eye bolts were provided at each corner to facilitate handling and 8-in. by 8-in. cast iron nuts, tapped to receive

2-in. bolts, were cast in the bottom at each corner so as to center over the 12-in. by 12-in. plates set in the top of the



Details of the Center Pier Reinforcement and Concrete Cap

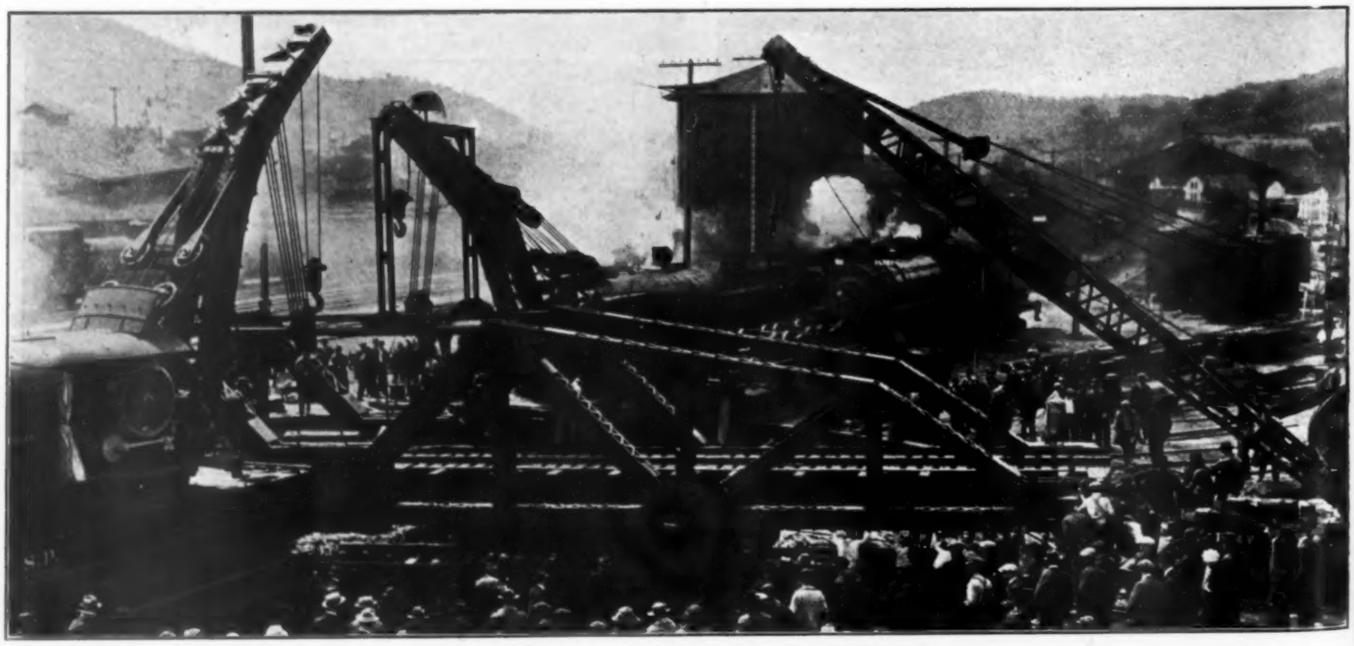
pier. The object of these will be explained later. In addition, two portable frame trestles about 25 ft. long were built and assembled complete with ties and rails to facilitate their quick handling with hoisting equipment. These were also erected next to the pit.

The new 100-ft. turntable was erected on a four-axle carriage which rested on a skidway, consisting of four well greased rails supported on cribbing. This skidway had only been built to the edge of the 70-ft. pit but plenty of material was provided at hand to extend it to the center as soon as the old table was removed.

After the last engine had been turned on the old table a locomotive crane was placed on a radial track alongside of the new table in its position on the skids. The old table was then turned in line with the new table. Two derrick cranes were stationed at the edge of the pit, opposite each other and at right angles to the old table. With this setting actual replacement work commenced.

The two cranes picked up the two temporary trestles and placed them in the pit in line with the radial tracks so that the rails could be connected and moved forward to reach over the center of the turntable. During this time the old center anchor bolts were cut with acetylene torches. One crane picked up the table and swung it clear, while the other crane picked up the old center which had been drilled and chained previously so as to lift easily. While the old table and center were being swung clear, crews in the pit cleaned out the accumulation of debris and water and cut down any uneven spots on the surface of the center pier with jack hammer drills. This completed, one of the cranes swung the new concrete cap into the pit where it was set on cribbing.

The crane then lifted the cap with the aid of the eyebolts in the corners a sufficient amount to remove the cribbing and place it on the pier. But as the bolts or leveling screws had been screwed into the four 8-in. by 8-in. nuts a sufficient amount to project below the bottom of the caps to bear on the four steel plates set in the foundation pier for that purpose, the cap was supported clear of the base by ¾ in. This space was filled with grout prepared wet but not in a liquid state, which was forced under the cap by means of pumps through the holes provided in the block for that purpose. The leveling screws were gradually backed off to insure uniform settlement after the grout had been placed. The position of the cap was held laterally by two dowels and wedges set at each corner and was then set to exact grade and center by means of an engineer's transit and a level.



The New Table Was Lifted Clear of the Carriage 11:31½ a. m.

While the cap was being set, part of the crew extended the skidway from the new table to the center of the pit and removed the old radial tracks which would have fouled the

new table. A long cable passing through a snatch block was attached to the new table and extended across the pit to a locomotive directly opposite and on a line with the skid. The engine then slowly pulled the table along the greased skidway until the carriage on which it rested was directly over the cap. The two derrick cranes, again standing at right angles to the table were hooked to slings attached to the center of the table and lifted it so that the carriage and the skidway could be removed. The table was then lowered exactly over the center. While the cranes backed off, removing at the same time the temporary trestles on which they had operated, framework for the motor and wiring were connected on the table. The table was immediately turned electrically and without load, exactly 1 hr. and 45 min. after the old table was last turned. An engine was then run on the new table and turned without a hitch.

The replacement work was in charge of W. H. Kirkbride, engineer maintenance of way; H. A. Hampton, division engineer and O. V. Chesney, supervisor of bridges and buildings. The engineering details were arranged by F. L. Monroe, assistant engineer; D. S. Weir, assistant superintendent handling the operating details and Foreman M. G. Kirkpatrick assisted by Foremen H. C. Klinge and L. Hitchcock, supervised the work of the three bridge and building crews doing the actual construction work. A total of 47 men were employed in the work.

Control of I. G. N. by Gulf Coast Lines Authorized

Acquisition of Stock by New Orleans, Texas & Mexico Approved by I. C. C. with Certain Conditions

Acquisition by the New Orleans, Texas & Mexico of control of the International-Great Northern by purchase of all of its capital stock, amounting to $7,500,000, par value, at a price of $31 a share, was conditionally approved and authorized by the Interstate Commerce Commission in a decision dated June 12 and made public on the following day. The acquisition proposed is in accord with the tentative consolidation plan, as both lines are included in System No. 19, but as System No. 19 is based primarily on the Missouri Pacific properties, and the Missouri Pacific has pending before the commission in Finance Docket No. 4049 an application for authority to purchase the stock of the New Orleans, Texas & Mexico, the commission says that the ultimate disposition of the International should be considered in connection with the conclusions which may be reached in that case. The authority is therefore made subject to the following conditions:

Conditions

(1) That if, upon further consideration in connection with the proceedings in Finance Docket No. 4049, the commission shall finally determine that it is not in the public interest for the applicant to hold said stock of the International company, the applicant shall within 90 days thereafter sell and dispose of said stock.

(2) That the applicant, within 20 days from the date of the acquisition of the stock herein authorized to be acquired shall procure and submit to the commission an agreement on the part of responsible banking concerns, who shall agree that, in the event that the commission shall finally determine that it is not in the public interest for the applicant to hold said stock of the International company, they will purchase the same at not less than the price which the applicant shall pay for the same under its said option.

(3) The control herein authorized shall be held subject to such conditions as to the maintenance of joint through routes, open gateways and trackage rights, or other requirements as to operation as the commission on further consideration in connection with the proceedings in Finance Docket No. 4049, or otherwise, after hearing, may find to be in the public interest.

(4) The commission reserves jurisdiction over this proceeding to make such further order or orders as, after further consideration, it may deem to be necessary or appropriate.

Plan of Control

Objections to the granting of the application were filed and a hearing was held by the Railroad Commission of Texas, which forwarded the transcript without recommendation.

In *International-Great Northern Reorganization*, 72 I. C. C. 722, the commission authorized the International company to issue $20,000,000 of first mortgage 30-year 6 per cent gold bonds, series A; $17,000,000 of adjustment-mortgage 30-year 6 per cent gold bonds, series A; and $7,500,000 of common capital stock, consisting of 75,000 shares of $100 each. The capital stock is held by three individuals as voting trustees under an agreement with the owners of the stock dated November 1, 1922, by which the trustees were authorized to sell the stock.

On February 14, 1924, the applicant made a contract with the voting trustees to purchase all the capital stock of the International company for $31 a share. The price to be paid for the stock is based upon the applicant's opinion that it will be able to operate the I.-G. N. more economically, and that the earnings will increase sufficiently to justify the expectation of a proper income from operations upon the capital stock.

The N. O. T. & M. proposed to guarantee a minimum of 4 per cent per annum on the adjustment mortgage bonds, series A, of the International company for the years 1924 to 1927, both inclusive, in consideration of the grant by the owners of an option to purchase the assenting bonds on certain prescribed terms. The commission, after finding that the terms under which the applicant plans to acquire the capital stock and the consideration which it proposes to pay therefor are just and reasonable, says in part:

The Commission's Decision

It is represented that the proposed acquisition will give the applicant an entrance into Houston over its own rails and will enable it to serve directly the important cities of Fort Worth, Palestine, Austin, San Antonio, and Laredo; that it will afford a proper connection for the applicant's northbound business, thus facilitating the economical handling of a large volume of traffic originating on its system; that it will give the applicant important through connections at northern Texas junctions, and will provide additional eastern connections for the International company through New Orleans.

It is claimed that each line would supplement and strengthen the other without detriment to the present effectiveness of either; that the applicant probably originates a larger percentage of its total traffic than any other railroad in the territory, and could increase materially the revenues of the International company by delivering to it northbound traffic. The larger freight movement on the International railroad is southbound, and it is testified that economies could be effected by balancing the tonnage in opposite directions. Savings in operating costs are expected to result from the combined use of equipment, as the peak movement on the two lines is seasonal and occurs largely at different times. It is stated that the proposed acquisition would enable the applicant to concentrate equipment where needed to care for this movement. The applicant estimates that the combination of the terminals at Houston would effect an annual saving of approximately $200,000, and would facilitate the movement of traffic by eliminating interchanges. The control of the International company is expected to increase the ability of the applicant to handle and control Mexican

traffic. It states that it would continue the development of the route through Laredo, taking full advantage of its strategic value. It is testified that during the receivership of the International company approximately 72 per cent of the Mexican traffic passed through the Laredo gateway, and only about 6 per cent was routed over the applicant's line through Brownsville. It is further represented that the applicant's control of the International company would strengthen the latter's credit.

Chambers of Commerce in Favor

The chambers of commerce of Houston and Beaumont intervened in support of the application. Copies of resolutions adopted by the chambers of commerce or corresponding commercial organizations of Dallas, Fort Worth, Mart, Houston, Beaumont, and Laredo, Tex., and New Orleans, La., all favoring the proposed acquisition, were introduced in evidence. Representatives of business men's organizations of Paris, and Texas City, Tex., testified in favor of granting the authority sought, and the traffic manager of the Chamber of Commerce of Galveston testified that that organization was opposed to the acquisition. The conclusions reached in the resolutions have not, in every instance, met with the unanimous support of the membership of the various organizations, and some testimony from local witnesses was offered in opposition to the position taken by the commercial organizations.

The composite conclusion deducible from the various resolutions is that in the opinion of their authors the proposed acquisition would be in the public interest because it would serve the best interests of the state of Texas; would materially strengthen the transportation system in north central and west Texas territory; would coordinate the service and result in more efficient and economical operation; would aid in building up the territory traversed by the railroad of the International company, and open up new markets for the producers of southern and southwestern Texas.

Some Opposition

Intervening petitions in opposition to the application were filed by the city of San Antonio and certain of its business organizations; the chambers of commerce of Austin and of various smaller points in southwest Texas; the city of Taylor; certain citizens of Rio Grande City, Starr County, and Houston; the Sugarland Railway Company, Sugarland Industries, and W. T. Eldridge, Jesse H. Jones, and John H. Kirby, individually. A protest against the granting of the application, signed by certain citizens of Brownsville, was introduced in evidence. The intervening petitions allege in substance that the proposed acquisition would retard the development of the territory and injure property interests; would destroy competition and established routes and channels of trade; that it would be to the interest of the applicant to haul traffic to New Orleans, which would be detrimental to the ports of Houston and Galveston; that it would be inimical to the Rio Grande Valley and would probably prevent the construction of additional railroads in that territory; that it would destroy the long-established through route via Longview and the Texas & Pacific and Missouri Pacific railroads; that it is inconsistent with our plan for the consolidation of railroads, and would violate the constitution and laws of Texas, because the lines are parallel and competing.

An intervening petition filed by the county of Anderson, Tex., and certain of its citizens alleges that the proposed acquisition is prohibited by the constitution and laws of Texas; that it would destroy competition between the two railroads, and would override the statutes of Texas with respect to the location and maintenance of the general offices and shops of the International company, and the judgments of the courts of Texas and of the Supreme Court of the United States requiring such offices and shops to remain at Palestine. It appears that in 1872 the Houston & Great Northern Railway Company, a predecessor of the International company, made a contract with the citizens of Palestine and Anderson county by which it obligated itself to maintain forever its general offices, shops, and roundhouses at Palestine in consideration of certain aid granted. This contract has been the subject of protracted litigation, which has resulted in favor of the interveners. These interveners ask that if the application be granted, terms and conditions be imposed which will fully protect their contract rights. The president of the applicant testified that if the acquisition be authorized his company would assume every contract or obligation binding upon the International company. It is not shown and does not appear how a change in ownership of the controlling stock interest could relieve the International company from any legal obligation.

Texas Laws

The state of Texas, by its attorney general, filed representations setting forth certain provisions of its constitution and statutes, which prohibit a railroad company organized under the laws of Texas from consolidating with a railroad company organized under the laws of any other state or of the United States, and provide that no railroad corporation shall acquire control of another railroad corporation which owns or controls a parallel or competing line. It protests against the entry of any order that would conflict with or contravene the provisions of its constitution and statutes, and asks that if the application be granted, the order be so conditioned as to require the International company to maintain its general offices, machine shops, and roundhouses in the city of Palestine in accordance with the contract hereinabove referred to. The applicant and the International company are organized under the laws of Louisiana and Texas, respectively. Paragraph (2) of section 5 confers jurisdiction upon us to authorize one carrier to acquire control of another carrier by purchase of capital stock or in any other manner not amounting to a consolidation, thus recognizing that the acquisition of a controlling stock interest does not effect a consolidation of the companies. The record shows that, with few exceptions, the controlling stock interest of all railroads operating in Texas is owned by railroad corporations foreign to that state. This fact is of evidentiary value in illustrating the construction that the state has placed upon the constitutional provisions in question. If it be conceded that the two railroads are, to some extent, parallel and competing, we are of opinion that fact should not control our action in this proceeding.

Competition with New Orleans

The protestants urge that the public interest demands the development of the Texas Gulf ports as the logical outlet of the Southwest; that these ports are in keen competition with New Orleans; that the traffic policy of the applicant in the past has been to favor New Orleans; and that therefore the proposed acquisition is not in the public interest. It is evident that the interested Texas ports are not in accord with the conclusion reached by the protestants, as they have all appeared in this proceeding in support of the application, excepting Galveston, and it is stated on its behalf that it has no objection to the granting of the authority requested. It is further claimed that long-existing routes and channels of trade would be disrupted, particularly the through route formed by the Missouri Pacific, the Texas & Pacific, and the International railways. It does not appear from the record that such a result is probable. The applicant disclaims any intention to disturb any strong, strategic route which either road now has, but states that it proposed to add to and build them up. The Texas & Pacific favors the granting of the application, and no objection to such action has been filed by the Missouri Pacific.

The objections of the San Antonio and Rio Grande Valley interests are based largely upon the matter of service. They assert that the service from Houston to the Valley is better than from San Antonio, and that this has the effect of diverting business from the latter point. It appears that the chief object of these protestants is to secure the construction of another railroad into the Valley, and they apparently fear that the proposed acquisition would defeat or delay such a project. They do not point out, however, how the applicant could prevent the building of another railroad if it should be found by us that such new construction would be in the public interest.

Possible Economies

The protestants deny that the applicant will be able to effect any substantial economies. They claim that the International company is in sound financial condition and able to finance its requirements; and that the proposed acquisition would place the applicant in a position where it could use the railroad, equipment, and traffic of the International company to maintain its level of earnings, at the expense of that company, its adjustment bondholders, and patrons. Finally it is asserted that the railroad of the International company should remain an independent bridge line, and that the acquisition should not be authorized prior to the promulgation of our complete plan for the consolidation of railroads.

The proposed acquisition apparently should effect large economies in operation, and strengthen the general transportation system in the territory served by the two lines. Unified operation should result in improved service, with a tendency toward a reduction of some rates through the establishment of a one-line haul.

During May the Missouri Pacific loaded locally and received from connections a total of 118,457 cars of revenue freight which is 8,809 cars more than the number moved in May, 1923. The daily average of 4,556 is 273 cars a day more than the best previous daily average for this month, which was established in May, 1917, when the average was 4,283. Improvement in operating efficiency was reflected in the daily average number of miles per car per day, the figure for May being 32.58, nearly the highest record. During May, 97 per cent of all passenger trains arrived at destination on time.

Denver & Rio Grande Western Takes on New Life

Changes in Operating Organization and Methods Lead to Better Performance and Reduced Costs

The Denver & Rio Grande Western has been prominently in the public eye for several years because of its financial difficulties. Its troubles, which resulted from the use of its credit for the construction of the Western Pacific and the debacle of the Gould System, have caused it to be regarded as a more or less hopeless property by many. This impression has been strengthened by the apparent lack of progress in recovery under various managements in recent years. However, this lack of progress has been due more to the failure of the financial interests to agree on a policy than to management, the most recent administration prior to the present one being hopelessly handicapped by inability to get the factions involved to agree upon a program.

With the appointment of T. H. Beacom as receiver by the court in July, 1923, without consultation with the owners of the property and, therefore, with responsibility solely to the court, this condition has been changed and the present receiver is enabled to devote his attention solely to the operation of the property. In spite of the fact that he has been on the road only since August 1, 1923, many changes have been made which have effected a marked improvement in operation.

Divisional Powers Broadened Under New Plan

The present program has been based on the assumption that it was not practicable to obtain any considerable amount of new capital for improvements and that any improvements which were made would have to be financed from money earned by the road. A thorough inspection of the property having satisfied the receiver that, with few exceptions, the organization did not lack for able railway men, the primary problem became that of developing a system under which these forces could be reduced and employed to the best advantage. It was decided first of all that better results could be obtained by reorganizing the division staffs to give the division superintendent more authority and responsibility for conditions on his territory. It was also decided that a considerable reduction could be made in certain classes of supervisory forces and that the organization invited some redistribution.

As an initial step in this direction the office of chief operating officer, which was vacant when the present receiver was appointed, was abolished and the duties assumed by the receiver, while the assistant chief operating officer was made general manager. Formerly there were two general superintendents, one stationed at Denver in charge of the Colorado lines and the other in Salt Lake City in charge of the Utah lines. In other words, the headquarters of the general superintendents were at the extremities of the road. In southern Colorado and northern New Mexico, however, there are approximately 1,000 miles of narrow gage lines in regard to the operation of which a great deal of complaint was being made by shippers and patrons in the vicinity. With a view to establishing closer contact with the shippers in this vicinity and improving operating conditions generally, the general superintendent's office at Denver was moved to Pueblo and a new general superintendent's office was established at Durango, in the heart of the rich mining, agricultural and stock raising country from which most of the complaints from shippers over narrow gage lines was coming. This arrangement provided for an operating officer resident in each of the three most important operating districts.

It was also decided to create the office of engineer maintenance of way, in order to concentrate responsibility for maintenance matters and to enable attention to be given to a great deal of maintenance work which had been deferred in prior years largely because of inter-departmental conflicts. Coincident with this change the office of assistant chief engineer was abolished, the engineer maintenance of way being given full responsibility for the upkeep of track and roadway and the chief engineer having jurisdiction over new work, standards and the custody of all property records other than those pertaining to the mechanical department. Further changes among the general officers included changing the title of superintendent of transportation to general superintendent of transportation and giving him increased authority and creating the office of general mechanical superintendent.

The greatest change was made in the divisional organization which had been built so largely along departmental lines that the superintendent had little to say as to what took place on the division. Each division had at least one assistant superintendent and in one or two cases there were two, in addition to several trainmasters, running as high as five on some divisions. On each division there was a supervisor of bridges and buildings, who reported, in a measure, to the superintendent but chiefly to the general supervisor of bridges and buildings, who in turn reported to the general superintendent. A number of traveling engineers and traveling firemen were also employed on each division, the traveling engineers reporting to the master mechanic and the traveling firemen to the master mechanic and also to the fuel supervisor as the traveling engineers devoted but little time to fuel conservation. Each division had also a division agent with jurisdiction over the stations, in connection with which the trainmasters and assistant superintendents had practically no responsibility, as regards organization and costs.

Drastic Cut in Division Forces

Among the first changes brought about was the abolition of the positions of assistant superintendent, division agent, traveling engineer and traveling fireman, the trainmasters being given the authority previously held by the assistant superintendent and in addition full responsibility for the proper and economical operation of the stations while the duties of the traveling engineer and traveling fireman were assigned to road foremen who report directly to the master mechanic. The master mechanic, in turn, in the new organization reports to the division superintedent on all matters except shop practices and output, concerning which he reports to the general mechanical superintendent. Coincident with the appointment of the road foremen the duties of such general officers as the assistant fuel supervisor, assistant superintendent of motive power, general foreman, general mechanical inspector and minor traveling supervisors were also taken over by the division organization. The special service department was reorganized with a reduction in force of approximately 50 per cent. Under the new organization the chief dispatcher is given more authority, signing all train orders in place of the superintendent, to whom he reports, and dispatching limits and headquarters have been changed to some extent so that dispatchers would be located more advantageously.

Under the new organization the division superintendent is

virtually general manager of his division, having full supervision over all departments, and expenses and having to assist him (1) a master mechanic, who reports to him on all equipment matters except shop practices and output which would naturally come under the supervision of the general mechanical superintendent, (2) a division engineer, who takes the place of the division roadmaster and has full charge for the superintendent of all track, bridge and building maintenance, his staff including the necessary roadmasters and a master carpenter, (3) trainmasters, who assume the jurisdiction previously held by the assistant superintendent and in addition full responsibility for the operation of stations, (4) road foremen, who assume the duties formerly performed by traveling engineers, traveling firemen, etc., (5) the necessary roadmasters, and (6) a special agent to handle matters ordinarily connected with the department.

The system organization consists of the general manager; a chief engineer, with jurisdiction over contracts, leases, real estate valuation, etc.; an engineer maintenance of way, with jurisdiction over the distribution of work equipment as well as charge of maintenance of way and structures, and of water supply; a general mechanical superintendent; a general superintendent of transportation, whose jurisdiction includes car service and power distribution between districts; a general supervisor of wages and working agreements; a fuel supervisor; three general superintendents, each a field man to carry out the instructions of the general officers and to see that train movements are unhampered; the division superintendents and the superintendent of shops, the latter reporting directly to the mechanical superintendent except on running repairs, in connection with which he is responsible to the division superintendent.

Half a Million Saved in General Office Expense

The official changes having been made, an opportunity was then presented to accomplish an improvement by a consolidation of clerical forces. All offices on the division were consolidated in the superintendent's office with one chief clerk in general charge and sub-clerks in charge of the various branches. In Denver the offices of the general manager, general mechanical superintendent and general superintendent of transportation were also consolidated. The arrangement has proven successful. Not only has a great deal of inter-departmental correspondence been eliminated and the work expedited but an actual reduction in the expense of supervision and clerical hire of from $400,000 to $500,000 per year has been effected.

In order that the organization may function smoothly much stress is laid on the holding of periodical meetings of the officers and employees. Among these meetings are those of the executive staff, comprising the receiver, general manager, general counsel, general auditor, chief traffic officer and treasurer, for the purpose of discussing matters of policy concerning the system, expenditures, etc. System staff meetings are also held periodically by the general officers on the staff of the general manager and divisional staff meetings are held each month under the direction of the division superintendent at which all division officers, including the trainmasters and chief dispatchers meet to discuss questions concerning train operation, safety, fire prevention, freight claim reduction, etc. The system fuel supervisor also holds meetings with the road foremen, enginemen and others at different terminals which meetings are similar to those conducted by the supervisor of safety and fire prevention. These various meetings have been instrumental in bringing out new ideas and establishing closer and more harmonious relationships between the management and employees.

Noticeable Improvements Shown in Service and Costs

While considerably less than a year has elapsed since this plan of organization was put into effect, sufficient results have been obtained to indicate that the plan is working successfully. Typical of this is the performance of passenger trains, as shown in the table, in which it is seen that 97.2 per cent of the passenger trains maintained their schedules in February, 1924, and 93.5 per cent in March, as compared with 66.8 per cent in September, 1923. The performance in February and March is all the more significant when it is considered that the Denver & Rio Grande Western is a mountain railroad.

On-Time Record of Passenger Trains

	Per cent on time
September, 1923	66.8
October	76.5
November	91.5
December	92.8
January, 1924	93.6
February	97.2
March	93.5

One of the most noticeable improvements that has taken place in the last few months has been in train loading. The first objective was to improve freight train movement. As a result the tons per train dropped off materially in September and October but the average speed per train increased. Attention was then given to regaining the tonnage without losing the benefits gained in speeding up train movement. It will be noted from the table that there has been a gradual improvement in this respect since November until in February the road handled the greatest tonnage per train and tons per freight train hour in its history. This performance is all the more interesting because of the decrease in business which invariably takes place on the Denver & Rio Grande Western after the first of the year, limiting the through train service generally to the "red ball" trains, which do not handle drag rating and when it is considered further that this record was made in weather requiring an adjustment in tonnage rating of as much as 13 tons per car because of low temperature.

Freight Train Performance

	Tons per train	Ton miles per freight train hour	Speed in miles per hour, freight
August, 1923	1,375	12,404	9.1
September	1,305	12,489	9.6
October	1,229	11,816	9.6
November	1,233	12,192	9.6
December	1,345	13,346	9.9
January, 1924	1,361	13,311	9.8
February	1,435	14,590	10.2

These figures cover both standard and narrow gage lines. For standard gage lines alone the tons per train averaged 1,620 during February and the tons per train hour 16,670 with an average speed of 10.3 miles. In February the train mileage on the narrow gage lines approximated 15 per cent of the total train miles run. Obviously these factors must be taken into consideration when considering the performance of the road as a whole, it being kept in mind furthermore that there are numerous grades of 4 per cent on the main lines in the narrow gage territory.

The improvement in the condition of locomotives, as shown by the record of the engine failures during the past year, is also illuminating. The table shows that by continuing the efforts begun under the previous management engine failures were reduced from 303 for the month of January, 1923, to 38 in February, 1924, while the miles per engine failure increased from 2,880 in January, 1923, to 17,600 in 1924.

Engine Failures by Months

	Failures	Av. per day	Miles per failure
January, 1923	303	9.77	2,880
February	258	9.21	2,941
March	258	8.32	3,065
April	184	6.13	4,135
May	173	5.58	4,810
June	150	5.0	5,756
July	176	5.68	5,323
August	175	5.64	5,753
September	181	6.0	5,440
October	166	5.3	7,117
November	102	3.4	9,430
December	50	1.6	16,166
January, 1924	62	2.0	13,648
February	38	1.3	17,600

When a study is made of operating ratios it is found that a considerable fluctuation took place during the year but that on the whole a noticeable improvement is shown.

OPERATING RATIOS FOR 1923 AND 1924

	M. of W.	M. of E.	Transportation	Total
January, 1923	11.04	34.91	42.43	94.88
February	9.74	33.60	41.36	91.46
March	10.05	31.66	40.80	89.58
April	13.98	30.28	38.33	89.47
May	16.14	27.57	35.60	85.71
June	17.05	29.46	35.22	89.18
July	22.50	28.83	36.34	94.51
August	24.84	29.00	37.14	97.74
September	20.09	23.35	35.05	83.73
October	15.95	20.19	34.16	75.17
November	15.04	20.82	32.18	73.40
December	11.42	33.59	35.14	85.70
Total	16.00	27.91	36.71	86.82
January, 1924	10.07	29.87	39.91	86.41
February	9.94	29.66	36.25	82.65
March	10.94	28.88	34.91	81.69
April	14.59	24.25	33.03	78.64

The increases in the maintenance of equipment ratio for the months of December, January and February were brought about by extraordinary charges to those months. In December, 38 locomotives were charged out as obsolete in addition to turning out 42 engines from the shops and making heavy repairs on 469 freight cars and light repairs on 11,614 freight cars. In January 48 engines and 25 passenger cars were turned out from the shops, 61 freight cars given steel underframes and light repairs were made to 12,371 freight cars and heavy repairs to 460 cars, while in February 47 engines and 23 passenger cars were turned out of the shops, 159 freight cars given steel underframes and light repairs made to 11,871 cars and heavy repairs to 477 freight cars. In other words, advantage was taken of the slack winter months to put the equipment in shape for the coming season. Some snow trouble increased the transportation cost in January but the main explanation for this increase is an increase in business of a class which took cheaper rates, such as ice and coal.

In looking to greater efficiency and less expense in the operation of power, special stress has been laid upon the fuel cost and train and enginemen's wages.

OPERATING COSTS PER 1,000 GROSS TON MILES

	System, all lines	Standard gage lines
August, 1923	100.5 cents	83.1 cents
September	101.4 cents	85.4 cents
October	111.6 cents	93.0 cents
November	107.0 cents	88.9 cents
December	98.8 cents	84.1 cents
January, 1924	96.0 cents	81.7 cents
February	84.6 cents	73.6 cents

A reduction of approximately 16 cents per 1,000 gross ton miles has been effected since August, 1923, for the system as a whole while for the standard gage lines alone the cost per 1,000 gross ton miles was reduced 9.5 cents in February, 1924, as compared with August, 1923.

Substantial reductions have also been made in train, yard and engine-house costs. As the accompanying table shows, the direct train costs in January, 1924, showed a saving of $43,404, as compared with January, 1923, in spite of the fact that the business handled in January, 1924, was 24,000,000 gross ton miles greater than in January, 1923.

COMPARATIVE TRAIN COSTS

	January, 1924	January, 1923
Engine	$94,945	$105,274
Trainmen	83,940	91,607
Locomotive fuel	149,312	174,710
Total	$328,187	$371,591

COMPARATIVE YARD COSTS

Enginemen	$37,522	$41,140
Conductors and brakemen	58,477	60,858
Yardmasters and yard clerks	12,158	13,254
Fuel	32,112	43,239
Switch and signal tenders	3,794	4,185
Total	$144,063	$162,676

COMPARATIVE ENGINEHOUSE COSTS

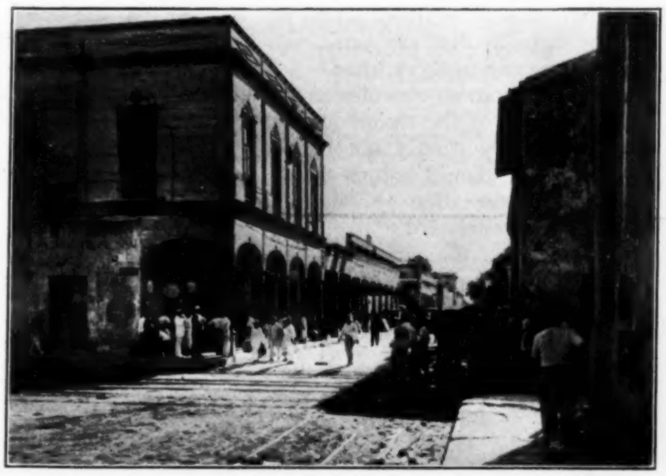
Labor	$68,395	$82,606
Material	3,131	5,909
Power plant	8,218	10,993
Other	3,322	2,495
Total	$84,066	$102,003
Engines handled	22,386	22,399
Cost per engine handled	$3.76	$4.55

In like manner the yard costs were reduced more than $22,000 in January, 1924, as compared with the same month of the previous year, while the enginehouse costs were reduced $18,000. In spite of the increase in gross ton miles noted above, the train hours in January, 1924, were 25,689, as compared with 28,254 in January, 1923.

Equally interesting are the records of gross earnings and expenses during the month of April, 1924, when a decline in the gross earnings of $107,177, as compared with the same period a year ago, was more than offset by a decrease in operating expenses of $351,722. For the first four months of 1924 the gross earnings decreased $385,621, as compared with the same period a year ago, while the operating expenses for the same period decreased $1,210,715. The principal sources of these savings have already been mentioned.

Probably the most spectacular of any single saving made and one which furnishes the best illustration of the freedom with which the new management has been able to carry out its plans is the narrowing of a section of standard gage track in the narrow gage territory. The Farmington branch consisted of a line of standard gage railroad 49 miles long, extending south from a connection with the narrow gage main line at Durango to Farmington. This required the transfer of freight at Durango and again at Alamosa where the narrow gage line joins the standard gage line to Denver. The burden of this condition was obvious. The remedy consisted of changing the gage of the branch line to the narrow gage of the territory, which work was done in two days' time by the section forces by simply pulling the spikes of one rail and moving it into position for a narrow gage line. The actual cost of this change amounted to only $12,255.49, while the annual savings approximates $50,000, in addition to improving the service.

The figures presented show the savings which have already been made. Consideration must also be given to the improvement in sentiment on the part of the men and the public. The shipping public and newspapers have been loud in their praise and the general feeling manifested both within the railway organization and with the shippers has afforded decided encouragement to the management to proceed with the policy now in fairly good working order.



Ewing Galloway

Station at Progreso, Yucatan

Carolina, Clinchfield & Ohio Lease Approved

Authority Granted, However, Is Subject to Important Conditions

Washington, D. C.

Acquisition by the Atlantic Coast Line and the Louisville & Nashville of joint control of the Carolina, Clinchfield & Ohio and its subsidiaries by lease for 999 years, in accordance with the application filed on July 20, 1923, which was the subject of hearings in September, was authorized and approved by the Interstate Commerce Commission, subject to several important conditions, some of which have been opposed by the applicants, in a report dated June 3 and made public on June 12. Commissioners Eastman, Campbell and McManamy dissented and Commissioners Hall and Potter concurred but objected to the conditions, which were those suggested to the parties in the case in a memorandum on February 9 for the purpose of eliciting expressions upon them.

At the hearing objections to the granting of the application were interposed by the Seaboard Air Line, the receiver of the Georgia & Florida, the Piedmont & Northern, and representatives of certain public and commercial bodies in the southeastern seaboard states. The Southeastern Railroad, a corporation organized for the purpose of constructing a line in the territory involved, intervened, alleging an interest by reason of the proposed construction. Representatives of certain public and commercial bodies in the territory served intervened in support of the application.

The governor and railroad commission of Florida, the governor and railroad commission of Kentucky, and the governor and railroad commission of Mississippi have indicated their approval of the application. The application was also approved by the corporation commission of Virginia, the railroad commissioner of South Carolina, and the public service commission of Georgia. The state corporation commission of Virginia has rescinded its action approving the application and stated that it has no representations to make in the premises. The railroad commission of South Carolina by a vote of 4 to 3 has withdrawn its approval of the application and now recommends that it be denied. After approving the lease, the public service commission of Georgia held a hearing and disapproved it by a vote of 3 to 2. Subsequently, it filed a protest to the granting of the application but stated that it would not be represented at the hearing. Later it withdrew its protest and indicated that it had no recommendations to make either for or against the lease. The governor of Georgia was represented at the hearing by the attorney general of Georgia and has advised that the latter is of the opinion that the lease will be injurious to the state of Georgia and to its railroad.

The corporation commission of North Carolina made its report a part of the record at the hearing, to the effect that the Clinchfield should not be permitted to remain a local property but should become a part of a comprehensive system of transportation by combination either with the Coast Line or the Seaboard.

The lines of the three Clinchfield companies form a continuous line from Elkhorn City, Ky., to Spartanburg, S. C., 276.85 miles. A branch of the Clinchfield extends from a connection with the Norfolk & Western at Carbo, Va., to Laurel, Va., 5.71 miles. The Clinchfield owns all the stock and bonds of the two other carriers. It operates its own lines and, under lease, the line of the Kentucky company. The Carolina company operates its own line. The total mileage operated is 309.21 miles, including 22.05 miles operated under trackage rights agreements.

The applicants and the three Clinchfield companies have entered into a tentative agreement providing for the proposed acquisition of control and assumption of obligation, if approved, by the execution of a lease, under which all the property, rights and franchises (except the franchise to be a corporation) of the three companies are demised to the applicants, jointly, for a period of 999 years from May 11, 1923, upon substantially the following terms:

Terms of the Lease

Prior to the execution of the lease the capitalization of the Clinchfield is to be reduced by proper legal action to $53,-292,000, consisting of first-mortgage 5 per cent 30-year gold bonds, due June 1, 1938, in the amount of $13,950,000, first and consolidated mortgage 30-year 6 per cent gold bonds, series A, due December 15, 1952, in the amount of $8,000,-000, Lick Creek & Lake Erie Railroad first-mortgage 5 per cent gold bonds due January 1, 1933, in the amount of $195,000, equipment trust notes and obligations in the amount of $6,147,000, and common capital stock of the par value of $25,000,000; as rental for the leased properties the lessees are to pay $750,000 per annum for three years beginning January 1, 1925, $1,000,000 for 10 years beginning January 1, 1928, and $1,250,000 per annum for the remainder of the term, being 3, 4 and 5 per cent, respectively, on the $25,000,000 of common capital stock; in addition, the lessees are to pay the interest on the bonds and equipment trust obligations, including such obligations as shall be issued by the Clinchfield in connection with the payment for certain locomotives now under construction, and on such other securities as may hereafter be issued under the terms of the lease; the lessees are also to pay the interest on $1,500,000 of Holston Corporation 5 per cent realty and collateral trust convertible notes, due April 1, 1926, guaranteed as to payment of principal and interest by the Clinchfield, if, and to the extent that, the latter is required to pay such interest; they are also to pay all taxes, assessments, and other governmental charges upon the leased properties, and certain other customary charges; money in possession of the lessors on May 11, 1923, and net income from the leased properties from said date to date of delivery of possession of the properties are to be applied by the lessors or the lessees in making additions and betterments, or otherwise as provided in the lease; the lessees may make additions and betterments, extensions and improvements to the leased properties and for expenditures made therefor shall be entitled to be reimbursed by the Clinchfield with its stock or bonds or both as the lessees shall specify, such securities to be taken by the latter at fair and reasonable market prices in view of market conditions and other circumstances existing at the time; and in like manner the lessees are to be reimbursed for all payments, costs and expenditures incurred in taking up maturing obligations of the Clinchfield.

The Commission's Report

The commission says in the report:

It apears that the primary object of the L. & N. in acquiring control of the Clinchfield, and making the proposed connection, is to relieve an intolerable car supply condition said to exist on its Lexington & Eastern line to McRoberts, and on its Cumberland Valley line in southeastern Kentucky.

The principal market for the coal mined in eastern and southeastern Kentucky is north and west of the Ohio River. A part of the coal from the Harlan field moves to points in Kentucky and to the southeast as far south as Georgia and Florida, and east into

the Carolinas. No coal from the Hazard field is shipped into the southeast. In marketing the coal in territory north of the Ohio river, the L. & N. is compelled to send its cars over the lines of its connections. The testimony is that these cars are not returned promptly and that, although the L. & N. has an ample supply of coal cars, there are often times of serious shortage, due to failure of its connections to return them; and that, in addition, there is often congestion at the Ohio river gateways. It is represented that this imposes a serious handicap on the proper marketing, and consequently upon the proper production of coal in these fields. To remedy this situation the L. & N. has been and is now making extensive improvements and additions and betterments. While it is intended that these improvements shall lessen, to some extent, the restriction under which the mines are now operating, and improve the operating condition on the lines of the L. & N., it is represented that permanent relief can be obtained only by securing another outlet from each of the two fields. This the L. & N. proposes to do in the event the lease is approved by constructing the proposed links between its McRoberts and Harlan County lines on the one hand and the Clinchfield on the other.

It is expected that when the proposed links are completed, coal from the eastern and southeastern Kentucky fields will find a market in the southeast; that this will result in cars passing both ways, thus better balancing movement; and that cars going to the south will be returned much more promptly than those going north for the reason that there would be less likelihood of the L. & N. cars being misused in the southeast, there being no coal mines in that territory, and it being to the interest of the Clinchfield and the Coast Line to expedite the return of empties. It is also expected that the links, or at least one of them, will afford a new merchandise route between southeastern territory on the one hand, and points in Kentucky and beyond the Ohio River to the north and west, on the other.

Proposed Connecting Line

No definite surveys covering the proposed connections between the L. & N. and the Clinchfield have been made. The plan is to build an extension of the McRoberts line through the mountains to Elkhorn City, and to connect the Harlan County branch from a point somewhere near its eastern terminus with the Clinchfield either directly or in combination with some of the existing lines on the Virginia side of the mountains. The only projections that have been made, however, covering the Harlan County connection are reconnaissance surveys and tests from contour maps. The testimony is that there are 18 feasible routes or combinations of routes, the shortest of which would require constructing about 5.75 miles of railroad. The shortest feasible route from the eastern terminus of the Harlan County branch to the Clinchfield is said to be about 38 miles.

In support of the application it is claimed that numerous benefits will accrue to the three systems involved and to the territory and industries they serve. The interveners who are in favor of the lease expect practically the same benefits to result from its approval. Most of them expect some special advantage to their particular business, organization or community. While generally conceding that the proposed connections between the L. & N. and the Clinchfield would be in the public interest, the interveners opposing the lease contend that it would not be in the interest of the public for the applicants to be in complete control of the line of the carriers. For the most part they are fearful that approval of the lease will be injurious to their particular business, organization, or community.

The Public Interest

Under paragraph (2) of section 5 we are given broad powers to consider questions of public interest involved in the acquisition of control by one carrier of another, and are given authority by order to approve and authorize such acquisition under such rules and regulations and for such consideration and on such terms and conditions as shall be found by us to be just and reasonable in the premises. The primary consideration in all such cases arising under paragraph (2) must be whether the proposed acquisition of control is in the public interest. The public interest, however, is the aggregate of many individual and community interests, and where there is conflict as to the results which would follow the approval of a proposed transaction, it becomes necessary to examine the claims of the conflicting interests in order to determine the ultimate public interest.

The rent to be paid by the applicants is based on a capitalization of $54,792,000, including the $1,500,0000 of Holston Corporation notes, guaranteed by the Clinchfield. The applicants represent, and the testimony of witnesses familiar with the property of the carriers is, that it is worth at least $55,000,000. Our tentative valuation of the properties pursuant to section 19a of the act has not yet been completed. It will be noted that the rental to be paid is not based on the outstanding securities. These are to be reduced by $16,500,000, the reduction to be effected by retiring $5,000,000, principal amount, of 15-year 6 per cent cumulative income debentures and $11,500,000, par value, of 6 per cent non-cumulative preferred stock. For the purposes of this proceeding we may accept the capitalization of the carriers, as reduced, as fairly representative of the value of the properties to be leased. The rent to be paid, based on this capitalization, and the terms and conditions of the lease appear to be just and reasonable.

The position of the applicants as to public interest involved in the proposed acquisition of control, is, briefly stated, that it will open up the Kentucky coal fields to the Carolinas and the south Atlantic ports; will afford a new and competitive merchandise route between the northwest and the southeast; and will benefit the three systems with resultant benefits to the industries and the territory they serve. Their chief reliance is on the first two propositions. Both applicants expect to benefit by the addition to their system of 287 miles of what they hope will prove a remunerative line. In addition, the L. & N. expects to find relief in the matter of its car service to the eastern and southeastern Kentucky coal fields, and the Coast Line, which has no coal on its own rails, expects to benefit by having access over the controlled lines of the carriers to the Kentucky and southwestern Virginia coal fields. It is argued that the lease will benefit the Clinchfield in that it will insure the immediate and future development of its properties and enable its owners to derive some profit from their investment. Particular benefits are expected to accrue to the Kentucky coal operators in opening up for them a market in the southeast; to the Clinchfield territory by making possible its development, removing its industries from a position of semi-isolation, and by giving its coal operators a route to the northern markets; and to the industries in the territory reached by the Coast Line by giving them trunk-line service and access over one system to sources of coal supply.

It is claimed that the extension and improvement of the Clinchfield will be assured by placing it under control of carriers whose interest will be to develop it, and whose financial strength is such that this development can be financed at all times and on reasonable terms. So far as appears, the Clinchfield has in the past experienced no difficulties in financing its capital expenditures or in expanding its property to meet the constantly growing demands upon it. Moreover, it appears that most of the improvements to be made in the immediate future, in the event the lease is approved, are to be paid for out of the current funds and earnings of the Clinchfield. As to the development of the latent possibilities of the Clinchfield territory, the record contains no evidence that any Clinchfield territory has suffered because of inadequate transportation service, lack of markets, or injurious rates.

Considering the development of the Carolinas, and the probable continuance of this development, the day is doubtless not far distant when it will be very much in the interest of the entire Southeast to have available the sources of fuel in southeastern Kentucky. The record shows that there have been times in the past when because of inadequate car service or strikes, industries in the Carolinas have been unable to secure coal in the quantities desired. It is obvious that situations might arise from strikes or other causes, where the present sources of coal supply for the southeastern States might be closed to them. On such occasions it would be very desirable, and much in the interest of the section concerned, to have access to the vast reservoirs of eastern Kentucky coal. Moreover, the public should benefit by the added competition.

We do not regard as unwarranted the position of the L. & N. that without an interest in the profits which it hopes to derive from its interest in the lease, it would not be to its interest to build the proposed connections for the short hauls it would receive on coal moving over these connections to the southeast. The opening of the southeastern Kentucky coal fields, however, is not dependent upon the approval of the proposed lease or on the building of the connections by the L. & N. There is now pending before us an application of the Southeastern, for a certificate of public convenience and necessity to construct a line of railroad about 12 miles in length from a connection with the Virginia & Southwestern Railway to a connection with the Harlan County branch of the L. & N. So far as appears, it is the intention of the Southeastern to begin immediate construction of this line if it is granted a certificate of public convenience and necessity. Its financial arrangements have not yet been completed; but there is evidence that it will receive the support of certain coal operators in southeastern Kentucky, who have entered into contracts with the promoters of the Southeastern, to pay them a bonus of five cents a ton on all coal shipped over the proposed line until they have paid the promoters an aggregate of $6,000,000. There would be certain advantages in having the L. & N. build such a line, chief of which would be the one system haul into the Carolinas, and the possible use of the line as a link in a new through competitive merchandise route.

The major public interest involved in the proposed acquisition and control of the Clinchfield lies in its utilization as a link in a new through route between the southeast and the northwest.

The territory along the Clinchfield is rich in natural resources, chief of which is coal. It appears that the Clinchfield was con-

structed primarily to develop the resources of this territory, and especially to afford transportation for coal. The construction is of the most modern type, with easy grades which fit it for transportation of large units of freight at low cost. Its chief source of traffic is coal, which comprises about 70 per cent of its tonnage. The development of the Clinchfield has been principally as an originating line.

The Clinchfield has established in connection with the Chesapeake and other connecting lines numerous through routes and joint rates between the southeast and central west. With the exception, however, of coal received from the Southern and the Norfolk & Western, very little of the Clinchfield's traffic received from connections is for destinations beyond its own line, its connections preferring their longer hauls via other routes. The Seaboard, the Coast Line, the Norfolk & Western, and the Chesapeake prefer their central and eastern Virginia gateways for traffic between the southeast and the northwest, and the L. & N. prefers its own line for traffic between the northwest and points south of Atlanta and the Savannah river, and the line of the Southern, through its connection at Jellico, Tenn., for traffic destined to the Carolinas.

The record shows that there are considerable areas in southeastern territory competitive only as between the Coast Line and the Seaboard. It is the established policy of both the Coast Line and the Seaboard to localize their competitive traffic as to all points on owned or controlled lines. It appears that the Coast Line intends to extend this policy to traffic moving via the Clinchfield, to and from competitive points, unless the Coast Line routes are too circuitous. The applicants represent that as to points competitive between the Seaboard and Southern via the proposed new route, it would naturally be the policy of the L. & N. to prefer the Seaboard. As an evidence of the independence with which the L. & N. acts in routing its traffic, it is pointed out that its interchange with the Seaboard now exceeds its interchange with the Coast Line. It is claimed that any loss in traffic that the Seaboard might suffer at points competitive with the Coast Line, or because of diversion of traffic from the Virginia gateways, would be more than offset by gains in traffic handled in connection with the L. & N. and Clinchfield in competition with the Southern, and in additional traffic to and from the southeast because of the impetus which the new route is expected to give to the development of the territory. The record indicates, however, that as to certain territory the Seaboard would necessarily lose some traffic and that competition as to such territory would be diminished.

The applicants argue that any losses in competitive traffic by the Seaboard would be a private loss which would not result in any injury to the public. Loss of competitive service to the territory reached by the Seaboard would hardly be in the interest of such territory. The relation of the Seaboard's loss of revenue to the public interest would depend, of course, upon the extent of the loss. Diminution to a point where it could not earn its fixed charges, or even to a point where its credit would be impaired, would certainly not be in the public interest.

The record discloses little need in so far as he Coast Line is concerned of improving its competitive position either by the addition of through routes or more direct avenues to sources of fuel supply.

Because of its isolation and the policy of its connections in preferring the longer hauls by more circuitous routes, the Clinchfield is not rendering the service for which it was designed and of which it is capable. The testimony is that its influence on the rate structures of the Carolinas, where its maximum influence should be felt, is practically nothing and that so long as it continues as an independent property its usefulness to the public will be circumscribed. Control of the Clinchfield by the applicants, when the proposed connections are made between the L. & N. and the Clinchfield, especially the connection with the Harlan County branch should result in added competition among the coal operators serving the Carolina markets; should give the Carolina territory an additional source of fuel in times of emergency; and should result in added competition with the Southern for Traffic between the Carolina territory and the Northwest, at least between the western portion of the Carolinas on the one hand, and Kentucky and points beyond the Ohio river west of the Cincinnati-Benton Harbor line on the other. Without some provision, however, for its use by other carriers as a link in through routes, control of the Clinchfield by the applicants would probably result in the abandonment of existing routes, especially the one via Elkhorn City and the Chesapeake; and would doubtless result in placing the Seaboard and other carriers of the Southeast at a disadvantage as compared with the Southern and Coast Line in competing for traffic between the northwest and certain sections of the southeast; although as to other sections of the southeast it might improve the competitive position of the Seaboard. One of the purposes of the transportation act, under the provisions of which the applicants are seeking to acquire control of the Clinchfield, is to foster the weaker carriers. The Seaboard is the weakest of the four great systems serving the southeast. Its independence and the support of its competitive position constitute an important factor in the public interest in transportation in that territory.

Common Control Urged by Interveners

Those opposing the lease urge that the interest of each of the interveners and of the public in general will be best served if the Clinchfield is maintained as an independent line supported to its connections at each end. They request that any approval of the proposed acquisition be under condition that the Clinchfield be maintained as an open route, neutral or impartial, and equally available to all connections. They generally urge that unconditional approval of the application be refused. The position of the Seaboard is that the public interest will be best served by placing the Clinchfield in a position similar to that of the Richmond, Fredericksburg & Potomac Railroad, that is, in control of its immediate existing and potential conections at each end in a way that will fairly protect the interest of each. The Seaboard proposes, in the event the application is denied, to submit a plan for such joint control of the Clinchfield. Under the provisions of paragraph (2) of section 5 we are not in a position to consider whether acquisition of control in some other manner than proposed, or by some other carrier than the applicant, would better serve the public interest. The question which we must determine in that regard is whether the acquisition of control proposed is in the public interest.

On February 9, 1924, before arriving at any conclusion, we sent a memorandum to persons who had intervened or filed appearances in the proceeding requesting that expressions be made regarding the arrangement to be sanctioned and required in case the decision of the commission should be favorable to the applicants' proposal, and asking for specific consideration of the effect of an order of approval made subject to certain conditions, set forth in the memorandum. On consideration of these conditions in connection with the representations filed, we have reached the conclusion that approval and authorization of the acquisition proposed will be in the public interest only upon the following conditions:

Conditions Required by Commission

1. The applicants shall establish and maintain a separate organization for the combined properties of the Carolina, Clinchfield & Ohio Railway and its subsidiaries, so that the three companies shall constitute a separate operating unit, having a responsible management directly in charge of the operations of such properties.

2. The Louisville & Nashville Railroad Company shall, within twelve months after the effective date hereof, file with the Commission its application under paragraph (18) of section 1 of the interstate commerce act, for a certificate of public convenience and necessity to construct the proposed connections between its McRoberts line and its Harlan County branch on the one hand, and the Clinchfield on the other, and in the event it proposes to acquire existing lines for use as part of such connections, under such other provisions of the act as are pertinent; and shall, if in such proceeding it is found that the present or future public convenience and necessity require or will require the construction of either or both such connections, proceed with such construction in accordance with the terms of the certificate issued in such proceeding.

3. So far as lies within the power of the applicants, existing routes and channels of trade and commerce heretofore established by other carriers in connection with the Clinchfield shall be preservod, existing gateways for the interchange of traffic with such other carriers shall be maintained, and the present neutrality of handling traffic inbound and outbound by the Carolina, Clinchfield & Ohio Railway and its subsidiary, the Carolina, Clinchfield & Ohio Railway of South Carolina, shall be continued so as to permit equal opportunity for service and routing or movement of traffic which is competitive with traffic of the applicants, or either of them, to and from all connecting lines reached by the line of the Clinchfield Companies, without discrimination in service against such competitive traffic.

4. The applicants shall permit the line of the Clinchfield and its subsidiaries to be used as a link for through traffic, via existing gateways of interchange, or via such gateways as may hereafter be established under authority of the Commission by means of the connecting lines which the Louisville & Nashville Railroad Company proposes to build, equally available to such other carriers, now connecting, or which may hereafter connect, with the line of the Clinchfield and its subsidiaries, as may desire to participate in through routes and joint rates between points in territory north and west of the line of the Clinchfield and points at and beyond the Ohio River on the one hand, and points in the southeastern and Carolina territory on the other, under divisions to be agreed upon by the applicants, or either of them, and/or the Clinchfield organization on the one hand, and by the other participating carrier or carriers on the other, and shall not discriminate as to rates, fares and charges against such participating carrier or carriers as compared with the applicants, or either of them; the intention of this provision being that the line of the Clinchfield and its subsidiaries shall be maintained as an open route equally available to all carriers connecting with the Clinchfield for traffic between the points designated.

5. It shall be expressly provided by the lease, as executed, that no securities shall be issued by the lessors, or any of them, except with our approval where such approval is required under the provisions of section 20a of the interstate commerce act; and that the par value of stock and/or the principal amount of bonds or other securities issued to refund maturing obligations or to reimburse the lessees for expenditures made as provided in the lease, shall not on the one hand exceed the principal amount of the securities refunded, and on the other, the amount of actual expenditures for additions, betterments, extensions or improvements properly chargeable under our accounting classification to capital accounts.

The applicants have protested vigorously against the imposition of conditions 3 and 4. We have considered fully their representations, however, and have reached the conclusion that without the observance of these conditions by the applicants, we are unable to find that the proposed acquisition of control would be in the public interest.

The Locomotive Day—in Dollars and Cents

An Imaginary Discussion of Locomotive Hour Costs by Officers of the X. Y. Z. Railroad

By Richard Lawrence

As a director of the X. Y. Z. Railroad I was particularly glad, on a recent trip to North Junction, to meet the president of the road and to be invited to join him in his business car on No. 3. As we traveled along in the late afternoon, the conversation naturally centered on finances and operation. Knowing my interest in railroad operation, he brought out a number of statements showing the hard time he was having in making a sufficient net return. This was happening in spite of the fact that there was plenty of freight to move. The trouble seemed to lie primarily in a power shortage at critical times. There were a sufficient number of locomotives on the road, but the serviceable percentage was low. We were still discussing the matter when we pulled into North Junction. The superintendent of motive power of the X. Y. Z. met us on the platform and the three of us made our way uptown to the Midland Hotel. Following an enjoyable dinner, the president excused himself, so the S. M. P. and I settled ourselves in comfortable lobby chairs to enjoy an after-dinner smoke. The X. Y. Z. situation was still on my mind. Here was an excellent opportunity to get first hand information.

"How is freight moving these days?" I asked in a matter-of-fact way.

"Not so good. Our connections are piling them in too fast. There are a thousand cars here at North Junction awaiting movement. These transportation men seem to think that we ought to keep locomotives moving like street cars."

"Yes? How many hours a day do they have the use of a locomotive?" I asked.

"The national average is eight hours a day."

"Then you have it the balance of the day?"

"Yes. It takes the rest of the day to repair these big locomotives to keep them running."

"Did you ever express those hours in dollars and cents?"

"Just what are you driving at in that remark?"

"Well, the prime purpose of every locomotive is to earn revenue and it cannot do that in an enginehouse. What is the average cost of one of these modern freight locomotives?"

"That last group of Mikados that we put in service cost $60,000 each. Some Mallets run into six figures."

"Now give me the carrying charge on power, in other words interest, etc."

"Figure six per cent for interest and four per cent for depreciation. Adding for taxes and insurance, the total is at least 12 per cent. This does not take into account the use of facilities and—"

"Let's keep to fundamentals at first. Now 12 per cent of $60,000 equals $7,200 as an annual charge. On a basis of 365 days, that means $19.73 a day. Since that sum must be earned in revenue service, it should be divided by 8 hours, giving a fixed charge of $2.47 an hour."

"Some of that fancy figuring!" exclaimed the superintendent of motive power. "You will make me look like a spendthrift in—"

"Nothing fancy at all; just straight business. Any going concern has the same thing in the form of fixed overhead. Furthermore, I am going to make you prove to yourself that it is reasonable. What rental do you have to pay for a locomotive?"

"Never less than $50 a day and often well beyond $100."

"That would run you from $6.25 to well up past $12.50 an hour. Does $2.47 look fancy?"

"Not now. Then every extra hour of service I can get out of a locomotive is worth at least $2.47?" he asked, in a manner indicating that some doubt still existed.

"Exactly," I replied, thinking fast to get a simple illustration, "If I had a factory working a single trick when a proposition came up to double the output, it would mean putting on two tricks or building a second factory. The first method would cut the fixed charges in half. The same thing is true of locomotives. Increasing the available service time will mean that fewer locomotives are needed to handle the business. A 10 per cent increase in daily locomotive mileage on the X. Y. Z. is just the same as buying 21 new locomotives. That means lower total fixed charges for power."

"I see it now. That makes it plainer than these complicated statements gotten up by the statisticians."

"Now, how about the other 16 hours?" I asked.

"Repairs or money?"

"Both."

"It is divided between classified and running. Some call it heavy and light. The first amounts to 2.4 hours while 13.6 hours a day are spent in enginehouses."

"Let's tackle the big item. How much money are you spending in the enginehouses? Include supervisory labor."

The superintendent of motive power pulled out his dope book and soon had the total expenditure summed on the back of an envelope.

"On 210 locomotives we spent $82,531 last month. That is equivalent to $13.10 per locomotive a day."

"Now divide it by 13.6 hours repair time."

"Why that is only 96 cents an hour!" he remarked in a hesitating way. He quickly checked his figures and seemed satisfied. "It looks too low but it checks. It doesn't seem good business to be spending only 96 cents an hour in labor for the out-of-service time while the fixed charges are $2.47 for each hour in service."

"Figures don't lie. Those costs mean that there are only about two men per locomotive in the enginehouse. It seems as though there ought to be more than that. There must

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THE LOCOMOTIVE DAY—IN DOLLARS AND CENTS

The railroad referred to in this article is imaginary. The discussion is imaginary. The discussion, however, is based on facts and conditions frequently encountered in American railroad practice. As a rule, these conditions can be found on any road where too much emphasis is placed on locomotive maintenance and running repair costs and too little on average daily locomotive mileage.

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be a lot of lost time somewhere. Suppose we start at the beginning."

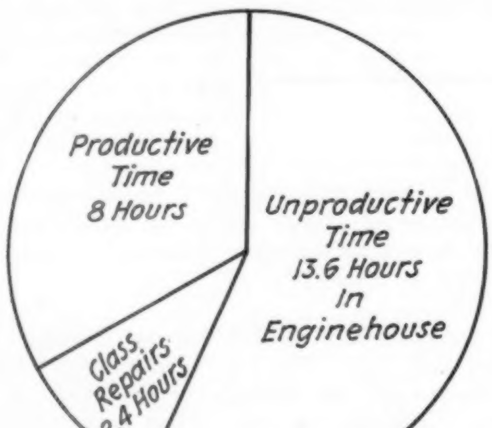
"You hit a nail on the head right there. At times it takes two to three hours to get them by the ashpits here at North Junction. The pits are too small. Further, all the ashes have to be hand shoveled. Sometimes they have to hold up incoming power to clean out the pits. The delay getting to the ashpits means a dead loss of time. The coal wharf and sand house are not much better."

"After that?"

"Comes the enginehouse. The best way to give you an idea of the delay there, would be to go over the lineup that Mike Grady gave me at eight o'clock this morning. The 3312 and 1497 were held over to finish boilerwash and monthly inspection. Cold water and low blower pressure mean three to four hours delay. Then there was the 150 tied up with a Form 5 on account of tires and lateral. There is only one old drop pit and the 898 was on that. She only needed one pair dropped so Mike worked her first. At that, he had to wait on a tire. He generally gets cleaned up a little before he tackles an all day job like the 150. He wasn't looking for that tie-up. It means several days lost time. Some roads would handle her in the back shop but the X. Y. Z. is short on pits and we had to do the Class 5 repairs in the enginehouses. My personal preference is to do this work in the enginehouse for two reasons. It warrants me in working more men. This helps to balance better, as I can swing them onto live work for a day when we are up against it. If you only handle light work, they make you cut your force to the bone and that means that any heavy run of work results in long delays to the last locomotives arriving. In the second place, it gives me a better chance to get needed facilities. The Old Man would not see them otherwise. He doesn't seem to appreciate fully the value of locomotive hours."

"What factors does he usually follow closest?"

"Cost of repairs per locomotive mile and enginehouse expense per mile are the first things he sees. They come in



Distribution of the Average Locomotive Day

for the lion's share of his personal attention. Miles per locomotive day get only a passing glance."

"That sounds natural. The old man's training in finance causes him to take that course. It's almost second nature. There ought to be some way of combining the two. You want to increase the serviceable time of your power right now. There is plenty of freight to move if you can just get the engines to move it. You have probably already planned the first move you would like to make."

"Yes. It's a matter of appropriations. To get those engines out quicker means more money in repairs. It costs to push things. The minute I opened up on expenditures, there would be an explosion at headquarters. The old man would land on me with both feet."

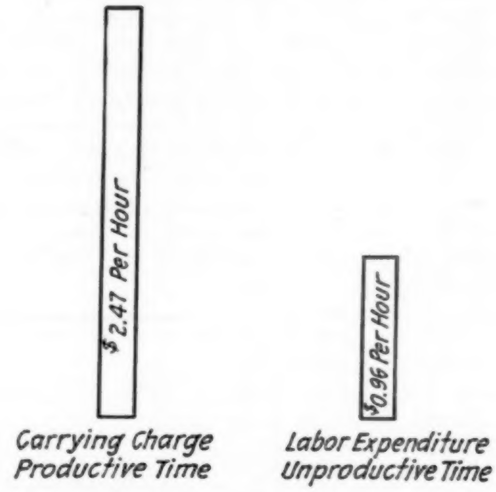
"But doesn't he need power?"

"Yes. But I would not have much chance persuading him to connect the two."

"Show him that the money was economically spent."

"That's more easily said than done. How would you do it?"

A large electric sign had been attracting my attention. The thought flashed through my mind that here was a splendid example of what I wanted to say.



Disproportionate Relation Between Carrying Charge and Labor Expenditure

"Look at that sign. What do you think it does to that manufacturer's expenses?"

"Why, it increases them."

"Exactly."

"But that manufacturer has found that it pays to advertise. He knows it means that the balance sheet shows a larger profit at the end of the year."

"That's just what I wanted you to say. You know that an increase in the serviceable time, even with a slightly higher expenditure in the enginehouse, means more net revenue for the X. Y. Z."

"I know it; but how about the old man—"

"That's what I am coming to now. Suppose you increased your enginehouse expenditure $1 for every locomotive handled. Do you think you could get one more hour of service?"

"Easy. A few more men would give me a chance to catch up with the work. I could almost eliminate the cumulative delay."

"What would be the total increase in your expenses?"

"That would be 210 locomotives times 30 days times $1 or $6,300 per month. The serviceable time would also be increased by 6,300 engine hours."

"Change that to dollars and cents too."

"That would be 6,300 times $2.47, or $15,561."

"That's all there is to it. Furthermore, it is the old man's language—dollars and cents."

To give him time to digest the thought, I stepped over to the cigar counter and lighted a fresh cigar. As I sat down again, the S. M. P. resumed immediately.

"I'll go you one better."

"In what way?"

"Instead of begging the old man for new facilities, I could go to him in a business way and demand them, offering to pay a rental based on their cost. It would be up to me to ask only for such as would save more than the rental in order to reduce the net charges. The thing to do now is

to put the whole idea over with the old man. If you could only put the whole thing up in statement form. That would make it like an open book to him."

"That can be done. I'll put it in the form that he uses for his reports. I'll let you have it in the morning."

"Fine. It will give me a chance to get some money to clean up this enginehouse congestion. Dead engines in the house won't clean up the yard."

"No. Get the taxicabs out and run them on Michigan Boulevard if you want to make a good net profit."

Here is the sheet that the S. M. P. handed to the president:

THE LOCOMOTIVE DAY

A Story Based on Facts and Told by Figures

Statement No. 1

The X. Y. Z. Railroad had	210 locomotives
The average daily productive time was	8 hours
The total daily productive time was	1,680 hours

Statement No. 2

With an increase in business of	10 per cent
Came a demand for a daily productive time of	1,848 hours
Which could be met by buying	21 locomotives
Or by increasing the average daily productive time to	8.8 hours

In order to determine the best method, the officials prepared Statement No. 3:

Carrying charges, based on productive time

Value of modern locomotive	$60,000	
Carrying charges		
Interest, 6 per cent	3,600	
Depreciation, 4 per cent	2,400	
Taxes, insurance, 2 per cent	1,200	
On yearly basis	$7,200	
On daily basis		19.73
On productive locomotive hour basis $= \frac{19.73}{8}$ or		2.47

Labor expenditures, based on unproductive time

Total labor cost of maining 210 locomotives one month	$82,531
On a daily basis per locomotive, assuming a 30-day month	13.10
Dividing by 13.6 to get labor cost per locomotive per enginehouse hour $= \frac{13.10}{13.6}$ or	.96

This difference was so much out of proportion that the S. M. P. guaranteed:

Statement No. 4

An increase in the average daily productive time per locomotive of	1 hour
At a cost per locomotive of	$1.00

At the end of the month the statistical reports showed:

Statement No. 5

	Jan., 1923	Jan., 1924
Average miles per month for freight locomotives	1,809	2,035
Locomotive maintenance (Account No. 308)	$151,956.00	$177,250.00
Cost per locomotive mile	0.40	0.414

The cost accountant gave the increased mileage only passing attention but, over the general manager's signature, he wrote a long letter to the S. M. P. severely criticizing the month's performance. After a lot of hard thinking, the S. M. P. answered with:

Statement No. 6

Allowable expenditure for 1924, based on 1923 rate per mile (2,035 ÷ 1,809 x $151,956.00)		$170,950.00
Increased expenditure necessary to increase average daily productive time		6,300.00
Total expenditure		$177,250.00
Increase in productive time	6,300 locomotive hrs.	
Value of increase per hour	$2.47	
Total value	$15,498.00	15,498.00
Reconstructed net expenditure		$161,752.00
Net cost per locomotive mile		0.378

Instead of an increase of 3.5 per cent, there is a saving of 5.4 per cent.

It paid!

"Cripples" in a Yard Near Moscow

Twenty-seven Medals for Pennsylvania Employees

May 28 was the occasion of the presentation by President Samuel Rea, of 27 medals, voted by the directors of the Pennsylvania Railroad in honor of 27 employees of the road who had been cited during the past year (and before) for notable acts of heroism. The picture shows 24 of the men thus honored, with two men and one woman, kinsfolk of Messrs. Hudack, Betters and Tilbury, three of the heroes who have died since the occasions which are now commemorated.

Supplementing the notice of this presentation ceremony which was printed in the *Railway Age* of June 7 (page 1382) there follow, in connection with the name of each individual, brief notes concerning the events commemorated.

JOHN A. HUDACK, deckhand, New York Division—for the rescue of an employee of the Long Island Railroad who had fallen into the water at Greenville Pier on February 1, 1923. Mr. Hudack is no longer living, and the medal was given to his brother, Frank Hudack.

E. J. HERBERT, extra tug captain, New York Division—for the rescue of a man who had fallen into the North River on March 12, 1923.

ROBERT BUSH, deckhand, New York Division—for the rescue of a man at Greenville Pier who had fallen overboard on August 16, 1923, and could not swim.

GEORGE COPE, freight brakeman, Atlantic Division—for

Pennsylvania Railroad Medal

the rescue of a child from the track in front of a freight train at Paulsboro, N. J., on April 27, 1922.

C. R. BLANK, brakeman, Philadelphia Terminal Division—for risking his life in saving the property of the railroad company, as well as the United States mail, during the fire which destroyed the Broad Street Station train shed June 10, 1923. Mr. Blank, during the fire, although a brakeman, acted as an engineer and removed from the burning train shed two locomotives and ten cars.

C. R. JENKINS, brakeman, Philadelphia Terminal division—acts similar to the above.

C. J. MURRAY, yard conductor, Maryland Division, Sharon Hill, Pa.—for the rescue of a child in front of a passenger train moving at a mile a minute at Trainer, Pa., August 25, 1923.

WILLIAM S. YOUNG, track foreman, Maryland division—for the rescue of a man who had fallen in front of a moving train at Edge Moor, Del., on June 16, 1923.

JOHN LAY, track foreman, Maryland division—for the rescue of two small children from the track in front of a moving train on July 27, 1923.

H. H. FINK, engineer, Middle division—for the rescue of a woman (a deaf-mute) from in front of cars in Newport yard on May 12, 1923.

JOHN W. SAXTON, operator, Tyrone division—for the

rescue of a child from in front of a moving train on June 8, 1923. Mr. Saxton leaped from the second-story window of his tower at Unionville, Pa., and snatched the child from sure death.

PETER KRUCK, car repairman, Pittsburgh division—for the rescue of employees injured in a fire on September 3, 1923, in a building used as sleeping quarters.

CHARLES E. BURR, yard clerk, Cleveland division—for the rescue of a woman on June 8, 1921, from in front of a moving train.

ALONZO DAWSON, crossing watchman, Marietta division—for the rescue of a small child on August 22, 1921, from in front of a moving train.

C. M. STANLEY, brakeman, Allegheny Division, for the rescue of a child from the track in front of a moving train on August 13, 1921.

GUY V. PARRISH, track laborer, Pan Handle division—for maugh division—for efforts to save the property of the company from fire at Braeburn, Pa., on March 29, 1923.

JOSEPH BASTOW, engineer, Conemaugh division—for efforts to save the property of the company from fire at Braeburn, Pa., on March 29, 1923.

C. E. HEIBERSDORF, conductor, Conemaugh division—for efforts to save the property of the company from fire at Braeburn, Pa., on March 29, 1923.

WILLIAM E. BETTERS, fireman, Conemaugh division—for efforts to save the property of the company from fire at Braeburn, Pa., on March 29, 1923. Mr. Betters lost his life by the fire and the medal was given to his father, Joseph H. Betters.

THOMAS ROTHBASS, yard conductor, Louisville division—for the rescue of a woman (a deaf-mute) walking on the track in front of an approaching train, July 26, 1922.

JASPERE BARATTA, baggageman, Chicago Terminal division—for the rescue of two young women at South Chicago on January 22, 1923.

Employees of Pennsylvania Railroad Honored at Philadelphia on May 28

First Row: M. P. Sherry, R. Bush, Peter Kruck, John Lay, W. J. Northey, J. W. Saxton. Second Row: Charles Pinti, Salvatore Costanzo, Jaspere Barratta, Frank Hudack, C. J. Murray, Mrs. F. L. VanTilbury, C. R. Jenkins. Third Row: Charles E. Burr, Joseph Bastow, Alonza Dawson, George D. Cope, Joseph Betters, Thomas Rothbass, H. H. Fink, G. V. Parrish. Last Row: R. M. Heigley, C. R. Blank, H. J. Herbert, W. S. Young, C. M. Stanley, C. E. Heibersdorf

the rescue of a woman crossing the track unaware of an approaching train on January 4, 1923.

MORRIS P. SHERRY, night yard clerk, Ashtabula Harbor—who while on duty jumped into the water and rescued a woman who had driven an automobile into the open draw of a bridge, on August 6, 1923.

SALVATORE COSTANZO, crossing watchman, Pan Handle Division—for the attempted rescue of a child crossing the tracks in front of a moving train on March 4, 1923.

CHARLES PINTI, car inspector, Pan Handle division—for pushing a stalled automobile truck off the track just in front of a passenger train on June 11, 1923, saving the life of the driver and avoiding a wreck.

WILLIAM J. NORTHEY, car inspector, Pan Handle division—for flagging a train and assisting in removing a woman from an automobile which had fallen on the tracks on December 26, 1922.

R. M. HEIGLEY, assistant road foreman of engines, Cone-

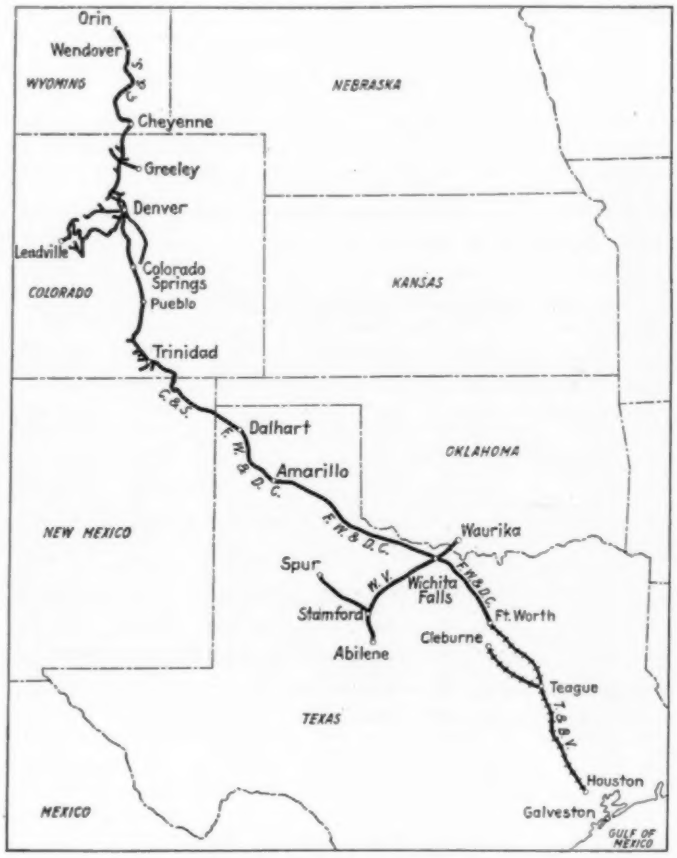
FRANK L. VAN TILBURY, station agent, Fort Wayne division—lost his life in attempting to rescue a man crossing the tracks on March 6, 1923. Mrs. Van Tilbury was present and received the medal.

NEW RECORDS, in any line, are likely, these days, to elude the most careful search; the field has been very thoroughly explored. But the enterprising press agent of the Pennsylvania Railroad has found one; it is "the world's record for continuous service, by twin brothers, in the employ of a railroad." William J. Christy, freight clerk, West Philadelphia, and John W. Christy, locomotive engineman on the Pittsburgh night express between Philadelphia and Harrisburg, brothers, born in Philadelphia on November 25, 1858, have together been in the service of the Pennsylvania 94 years and two months.

Colorado & Southern Handicapped by Floods

System Is in Three Parts—Fort Worth & Denver City Has Heaviest Traffic Density

The Colorado & Southern Lines are an extension of the Chicago, Burlington & Quincy system into the Southwest. They differ from the several other lines extending into the Southwest in that their direction is from northwest to southeast, which means that they are at right angles to practically all the other main routes serving that territory from the north. The Colorado & Southern Lines have been a part of the Burlington system since 1908. Control by the latter is exercised by means of majority stock ownership. The Burlington owns approximately three-quarters of the Colorado & Southern common stock and something less than half of the total combined outstanding issues of first and second preferred.



The Colorado & Southern

The Colorado & Southern Lines embody three constituent companies, namely, the Colorado & Southern Railway, the Fort Worth & Denver City and the Wichita Valley. Of the three, the Colorado & Southern is the parent company and it owns practically all of the outstanding stock of the other two. The lines of the system extend from Orin, Wyo., south through central Colorado and thence southeasterly across the panhandle of Texas to Fort Worth, Tex. Associated with the system but not a part of it is the Trinity & Brazos Valley which extends from Fort Worth, Tex., to Houston. This property is owned jointly by the Colorado & Southern and Chicago, Rock Island & Pacific. It is operated independently by a receiver and usually reports a deficit. The mileage of the Colorado & Southern Lines totals 1,827. The Colorado & Southern Railway owns 1,100 of this and its line includes the northern portion, namely; the line from Orin, Wyo., south through Cheyenne, Wyo., and through Boulder, Colo., Denver, Colorado Springs, and Trinidad to Texline on the boundary between Texas and New Mexico. There are also several branches, one to Leadville, one to Greeley and others to various mining operations. The Fort Worth & Denver City includes a mileage of 456 and its line includes that portion of the system extending across the panhandle of Texas through Amarillo, Wichita Falls, etc., to Fort Worth. Announcement was recently made that extension to Dallas was contemplated. The Wichita Valley has 271 miles of line extending from Waurika, Okla., crossing the F. W. & D. C. at Wichita Falls, to Stamford, Tex., Abilene, etc.

Character of Traffic

The Fort Worth & Denver City includes that portion of the system having the heaviest traffic density. In 1922—figures for the individual companies for 1923 are not available—the revenue ton-miles per mile of line averaged for the three constituent properties as follows: Colorado & Southern, 672,640; Fort Worth & Denver City, 1,011,765; Wichita Valley Lines, 119,891, and for the system as a whole, 679,712. Over half the total revenue tonnage of the Colorado & Southern portion is coal which, in 1922, made up 52.03 per cent while products of mines as a whole made up 65.25 per cent. Agricultural products made up but 13.50 per cent and manufactures and miscellaneous but 12.94 per cent. The Fort Worth & Denver City traffic in 1922 was 25.66 per cent products of agriculture, but 27.74 per cent products of mines and no less than 33.05 per cent manufactures and miscellaneous. Analysis of the latter group shows that the larger portion of the "manufactures" carried is in the form of petroleum and its products, which in 1922 constituted 15.86 per cent the total revenue tonnage. This is significant. In 1922, for example, the F. W. & D. C. tonnage of petroleum and its products was well over twice what it was in 1918. This means that the F. W. & D. C. has been one of the several roads that have participated in the prosperity that has been visited upon the state of Texas in particular as a result of the development of the oil resources of that state. The Wichita Valley is a line of light traffic density and it carries but a very small portion of the system's total tonnage. In 1922, 28.04 per cent of its total revenue tonnage was products of agriculture and 17.95 per cent petroleum and its products. The Wichita Valley serves a cotton producing area; in 1922, no less than 7.52 per cent of its total tonnage was of that commodity and no less than 8.56 per cent cotton seed and products.

The following tables gives a brief resumé of the character of the traffic handled on the various portions of the Colorado & Southern Lines.

Character of Traffic, 1922—Per Cents of Total Revenue Tonnage

Products of	C. & S.	F. W. & D.	W. V.	System
Agriculture	13.50	25.66	28.04	.....
Animals	3.03	5.20	7.74	.....
Mines	65.25	27.74	17.15	.....
Forests	3.76	5.88	6.63	.....
Manufactures of misc.	12.94	33.05	34.79	.....
L.c.l.	1.52	2.47	5.65	6
Total	100.	100.	100.	.....
Coal	52.03	17.06	9.78	.....
Refined petroleum	3,89	15.86	17.95	.....

Revenue Tons and Revenue Ton-Miles, 1922

Total revenue tons	5,143,844	2,611,068	339,479	7,104,853
Rev. ton-miles	739,339,000	461,679,000	30,784,000	1,231,802,000
Traffic density	672,640	1,011,765	119,891	679,712

Prior to 1918, the annual report for the Colorado & Southern gave earnings figures and operating statistics covering the system as a whole. Beginning with the annual report for 1918, system figures were not shown, but instead separate figures were shown for the three constituent properties. In the annual report for the year 1923, there is reversion to the former practice of showing system figures, although there are contained in the report certain data for the constituent companies also. Figures for 1922 are available in both forms, by constituent companies in the 1922 report and for the system as a whole in the "last year" columns of the 1923 report. This situation offers inconvenience in some respects but, of course, it does not lack value in others.

Did Not Have Good Year in 1923

The Colorado & Southern did not have a very good year in 1923. There were serious interruptions of service because of floods occurring between July and October on the northern lines of the Colorado & Southern itself and on the lines of its principal northern connections. The result was that there was a large diversion of traffic to other companies. The other portions of the system were better favored except that there was a certain drawback due to the decreased activity in the mid-continent oil fields caused by overproduction and the competition of the new oil producing areas of southern California. The tons of revenue freight handled by the system exceeded those of 1922 by 4.95 per cent. There was an increase in revenue ton-miles over 1922 of but 2.54 per cent. The 1923 revenue ton-miles were considerably less than in various preceding years, such as 1917, 1918, 1919 or 1920. The increase in traffic in 1923 over 1922 was largely in iron ore and sugar beets which move at low rates. This, combined with the reduction in rates effective on July 1, 1922, meant that the average receipts per ton per mile in 1923 were 1.401 cents as compared with 1.463 cents in 1922. Whereas there was an increase of 2.54 per cent in revenue ton-miles there was actually a decrease of 1.79 per cent in freight revenues and of 1.93 per cent in total revenues.

Total operating revenues in 1923 for the system were $23,860,220 as compared with $24,328,762 in 1922. Total operating expenses were $18,699,465 as compared with $18,556,860 in 1922, an increase of 0.77 per cent. The increase in expenses was due almost entirely to increased maintenance of equipment expenses resulting from the activity incident to catching up on work deferred during the shopmen's strike of 1922. In spite of flood damage, there were substantial decreases in maintenance of way expenses and in transportation expenses. The 1923 ratio of transportation expenses to total operating revenues was 35.59 as compared with 35.83 in 1922. The 1923 operating ratio of 78.37 compared with 76.28 in 1922 and with 72.80 in 1921.

The Colorado & Southern is far from being on a pre-war basis of net earnings. The following tabulation is a comparison of the net railway operating income of 1923 with the standard return for operations during federal control, or the average net operating income for the three years ended June 30, 1917.

Property	Standard return	Net railway operating income, 1923	Per cent
Colorado & Southern	$2,481,212	$790,130	32
Fort Worth & Denver City	1,891,386	2,877,039	152
Wichita Valley	352,367	398,106	113
System	$4,724,965	$4,065,274	86

Relative Earnings of Parts of System

This tabulation is significant from many points of view. It shows first that the system as a whole is not now earning as good net as it earned in the period prior to the war. It shows further that the Colorado & Southern portion of the system is less favored than the two other portions. Of course, the special situation ruling in 1923 had something to do with that. In 1922, however, the Colorado & Southern itself had a net operating income of $1,061,877. The 1923 net operating income was equivalent to only 32 per cent of the standard return. The 1922 net was equivalent to 43 per cent of the standard return. The situation as to the Fort Worth & Denver City is shown to be quite different. In 1923, its net operating income was equivalent to 151 per cent of its standard return. The 1923 net was larger than the net for 1922 which was $2,438,054. The improved position of the Fort Worth & Denver City is to be presumed to be very largely due to its increased traffic in petroleum products or at least to the increased prosperity of the territory which it serves due to the development of the oil refining industry.

COLORADO & SOUTHERN LINES, OPERATING RESULTS, SELECTED ITEMS, 1914 TO 1923

Year ended June 30—	Mileage	Revenue tons	Revenue ton-miles	Average haul	Revenue per ton-mile cents	Revenue train load	Revenue car load	Total operating revenues	Total operating expenses	Net operating revenue	Operating ratio	Net corporate income
1914	1,866	6,124,647	876,128,000	143	1.033	292	19.06	13,222,737	9,746,003	3,476,735	73.71	406,151
1915	1,840	6,449,670	983,465,000	152	1.013	308	19.35	14,172,978	10,110,875	4,062,102	71.34	615,149
1916	1,836	7,409,361	1,187,559,000	160	0.958	389	20.81	15,707,311	9,978,609	5,278,702	63.53	2,222,994
Year ended Dec. 31—												
1916	1,842	7,872,529	1,221,547,000	155	0.978	400	21.22	16,469,279	10,085,332	6,383,947	61.24	3,011,227
1917	1,842	8,729,712	1,302,711,000	149	1.025	399	22.42	18,685,810	11,596,301	7,089,510	62.06	3,607,801
1918—												
C. & S.	1,101	7,021,428	915,697,000	130	1.105	422	28.03	12,947,688	9,522,898	3,424,789	73.55	1,376,371
F. W. & D. C.	454	2,667,062	565,445,000	212	0.993	467	22.50	7,950,342	6,042,549	1,907,793	76.00	1,155,580
W. V.	257	268,990	22,297,000	83	2.610	126	14.33	840,394	683,663	156,731	81.35	101,729
1919—												
C. & S.	1,100	5,697,261	805,617,000	141	1.204	427	27.01	12,976,644	10,711,517	2,265,127	82.54	1,783,946
F. W. & D. C.	454	3,180,448	563,069,000	177	1.263	471	22.09	11,152,302	7,767,354	3,394,948	69.59	1,315,477
W. V.	257	365,005	31,032,000	87	2.520	178	18.32	1,227,501	912,423	315,078	74.33	118,407
1920—												
C. & S.	1,099	6,789,747	882,016,000	130	1.359	455	29.44	16,271,658	12,773,845	3,497,813	78.50	2,606,066
F. W. & D. C.	454	3,441,773	598,261,000	174	1.409	485	23.35	13,251,946	11,605,759	1,646,188	87.58	1,476,050
W. V.	256	472,020	41,619,000	92	2.962	221	19.52	1,858,543	1,458,296	400,247	78.46	143,386
1921—												
C. & S.	1,099	4,753,055	620,377,000	131	1.595	431	27.47	13,223,220	10,523,890	2,699,330	79.59	1,550,156
F. W. & D. C.	454	2,851,717	518,156,000	182	1.549	532	23.17	11,334,958	7,512,206	3,822,752	66.27	2,991,546
W. V.	256	385,456	37,624,000	98	3.374	234	20.58	1,723,110	1,097,987	625,123	63.72	178,122
1922—												
C. & S.	1,099	5,143,844	739,339,000	144	1.369	454	27.43	13,196,237	10,894,665	2,301,572	82.55	834,759
F. W. & D. C.	456	2,611,068	461,679,000	177	1.484	518	21.48	9,717,038	6,725,890	2,991,147	69.22	2,004,272
W. V.	257	339,479	30,784,000	91	3.395	190	17.94	1,415,488	936,304	479,184	66.15	18,159
System	1,812	7,104,853	1,231,802,000	173	1.463	460	24.56	24,328,762	18,556,860	5,771,902	76.28	1,737,276
1923	1,825	7,456,366	1,263,036,000	169	1.401	486	24.91	23,860,220	18,699,465	5,160,755	78.37	1,924,546

NOTE. Prior to 1918 the annual reports to stockholders gave figures for the Colorado & Southern Lines as a system. Beginning in 1918 system figures were not shown but, instead, the separate figures were shown for the constituent properties—Colorado & Southern, Fort Worth & Denver City and Wichita Valley. In 1923 there was reversion to the former practice of showing system figures. Figures are available in both forms for 1922.

The separate income accounts of the three companies constituting the Colorado & Southern Lines show net corporate income in 1923 as compared with 1922 as follows:

NET CORPORATE INCOME

	1923	1922
Colorado & Southern	$836,259	$834,759
Fort Worth & Denver City	2,425,990	2,004,272
Wichita Valley	150,660	18,159
System	1,924,546	1,737,276

It will be noted that the net reported for the system is not the total of the figures of net reported for the individual lines. The fact that it is not equal to the total is due to the elimination in it of overlapping items.

In 1923, the parent Colorado & Southern paid the usual 4 per cent dividends on its first and second preferred stocks which dividends totaled $680,000. The Fort Worth & Denver City usually pays substantial dividends, practically all of which accrue, as above noted, to the parent Colorado & Southern. The rate of dividends in 1921 was 11 per cent; in 1922, 11 per cent, and in 1923, 16 per cent. These 16 per cent dividends totaled $1,378,656. The Wichita Valley pays no dividends.

Rock Island Tests New Boiler Water Chemical

WITHIN THE LAST FEW WEEKS the Chicago, Rock Island & Pacific concluded a series of experiments in the treatment of water with sodium aluminate, a chemical which has not been available in the free state but which is now being obtained in large quantities as the chief constituent of a solution formed as an intermediate product in the production of aluminum. Its composition is as follows:

Water	61.75	per cent
Sodium Aluminate	18.14	" "
Caustic Soda	8.02	" "
Soda Ash	10.00	" "
Sodium Chloride	0.34	" "
Silica	0.02	" "
Organic Matter	0.73	" "

In the tests made on the Rock Island, the chemical was used both as a boiler compound and in water treating plants.

The troubles with water treatment or treated water which led the Rock Island to investigate the new chemical are principally of two classes. On one hand, the lime and soda ash treatment at some points has been found to give only partial softening of the water unless resort is had to the use of an excess amount of chemical which is considered objectionable, and occasionally even excess treatment proves ineffective. Under such conditions considerable scaleforming material remains in the water when it reaches the boiler where it settles on the flues or promotes foaming. Again, considerable trouble is regularly experienced in producing a treated water that is clear of all suspended matter when it leaves the treating plant, notwithstanding the use at the most troublesome points of alum or iron sulphate solutions as coagulants to aid in the clarifying process. The result of this is to prolong the time which the treated water must be retained in the settling tanks, thus limiting the capacity of the plant, and also causing considerable highly objectionable incrustation of pipe lines, locomotive branch pipes, boiler checks, etc. Also, where efforts at improving the water are confined to the use of boiler compounds, considerable trouble is encountered on occasions from foaming, as a result of the excessive concentration of mineral salts in the boiler.

The sodium aluminate solution is claimed to be more effective than alum and iron sulphate as a clarifying agent. This substance is also alkaline instead of acid in character, which makes it less likely to promote a corrosive water than some water treating chemicals are suspected of doing. It is also claimed that the substance, aside from being a clarifying agent, actually has softening properties and that less foaming will result where this is used as a boiler compound than where soda ash alone is used.

Boiler Compound Tests

Two locomotives were used in testing out the solution as a boiler compound, one a switch engine working in the yard at Silvis, Ill., the other a transfer engine working between Silvis and Davenport, Iowa. The tests were started in November, 1923, and continued until January 5, 1924. The solution was introduced in the boiler by syphoning through the injector, 1¼ gal. being introduced in the boiler of the switch engine each 24 hours and 1⅝ gal. in the boiler of the transfer engine each 24 hours. Previous to the tests the switch engine had run 5,256 miles since the last shopping and the transfer engine 15,330 miles. In both cases there was an average of ⅛-in. of scale on the tubes and crown sheets with large areas of scale in places as thick as ½-in. During the tests the switch engine ran 4,734 miles and the transfer engine 3,110 miles. While the engines were not entirely free from scale at the end of the tests, the solution had a marked effect in removing the old scale and in keeping new scale from forming. While the precipitate formed was of a flocculent nature and in spite of a large accumulation of this precipitate in the boiler at times, only one work sheet showed a record of foaming.

These observations led to the recommendation that the new substance be used as a compound, but only in stationary boilers since it is considered objectionable on the Rock Island to apply compound to locomotive boilers through the injectors. The opinion was expressed, moreover, that when beginning the use of sodium aluminate solution in a badly incrusted boiler, the amount of soda ash and caustic soda in the solution should be increased, also that with very bad water such an excess of soda ash and caustic soda might better be carried regularly.

Various Tests Conducted at Treating Plants

The first experiments with the new chemical in roadside water treating were carried out at Burr Oak, Ill., where the Rock Island has a continuous type treating plant. The first tests covered a period from November 20, 1923, to December 10, when the hardness of the untreated water ranged from 25 grains per gal. to 29 grains, with a range in sulphate hardness from 14 to 18 grains. The tests were made by using the lime and soda ash in the regular way and then introducing the sodium aluminate solution in a manner similar to that in which alum or iron sulphate is introduced. During these tests the water was observed to clear more quickly than where the lime and soda ash was used alone, but the improvement in softening anticipated by the results of laboratory tests did not take place, the treated water continuing to show about 7 grains hardness, 8 grains alkalinity and 10 grains causticity as before.

The decision was then made to try out the chemical at Herington, Kan., where the Rock Island has an intermittent plant, the thought being that a better control of operations would be obtained here than with the continuous system at Burr Oak. The untreated water on the first day was 28 grains hard with 20.8 grains alkalinity. In the first test, lime at the rate of 3.33 lb. per thousand gallons and soda ash at the rate of 1.39 lb. per thousand gallons were added and the solution agitated 45 min., and then allowed to settle for 2½ hours, whereupon a treated water was obtained with 8.5 grains hardness, 10.2 grains alkalinity and 13 grains causticity. Sodium aluminate was then added to the amount of 1 lb. per 1,000 gal., with the result that the water was reduced to 4.9 grains hardness, 7 grains alkalinity and 3.6 grains causticity.

A second test made under similar conditions except for

the use of only 0.84 lb. of sodium aluminate per 1,000 gal. produced like results. On the following day both tubs were first treated by using 3.33 lb. of lime per 1,000 gal. and 1.11 grains of soda ash, but without sodium aluminate. After three hours settling the water in one tank was found to be only 5 grains hard with 8 grains of alkalinity and 11.6 grains causticity, which was almost as good as the water treated on the previous day with sodium aluminate. This water settled three hours before treatment, however, and the water in the second tub was no better than was obtained with lime and soda ash treatment on the previous day. A second test on this tub, moreover, using 3.055 lb. of lime per 1,000 gal. and 0.833 lb. soda ash, produced a similar water which, when treated with 0.84 lb. per 1,000 gal. of sodium aluminate, was reduced to 4.5 grains hardness, 7.4 grains alkalinity and 10.4 grains of causticity, practically that obtained by sodium aluminate treatment on the preceding day.

The treatment on the third day, by a similar method, did not produce as good a water but in all cases showed a substantial reduction in the hardness over that with lime alone without excess alkalinity. Similar results were produced on the fifth and last day. In all cases, the water was observed to clear more quickly than where lime and soda ash was used alone, the time required for settling being reduced more than one hour in some cases. Added interest was taken in these observations when subsequent tests made in the laboratory indicated that even better results in clarifying could be obtained with equally low alkalinity by replacing the soda ash in part by the sodium aluminate and introducing the required amount of lime, soda ash and sodium aluminate at one time, which, from the nature of the new chemical, can be done without additional equipment.

With the experience gained in the use of the new chemical, a second series was ultimately carried out at Burr Oak, beginning February 28, 1924, and running until April 22. In this case the aluminate was mixed with the lime and soda ash and all three chemicals introduced into the untreated water at the same time. Unfortunately, this was a period when an erratic condition of untreated water prevailed, the hardness falling from 21 grains at the commencement of the test to 8.3 grains. As a result, the tests were not altogether satisfactory. It was observed, however, that treated water with a hardness as low as 2 and 3 grains was obtained in some tests. This is shown in the accompanying partial table of analyses for consecutive days.

Comparative Water Analyses

Raw water hardness	Treated water: Hardness	Alkalinity	Causticity
18.9	3.2	5.4	7.3
10.8	3.7	4.2	7.4
10.5	2.9	3.7	4.0
10.0	2.8	3.6	4.3
11.2	3.0	3.7	4.7
14.1	3.2	3.7	4.5
16.1	4.5	4.2	5.5
17.8	6.1	5.5	6.7
18.8	7.5	7.7	9.8
16.9	6.7	8.9	11.5
16.0	5.8	6.5	8.0

These were exceptional results from Burr Oak water. Excellent results were also obtained in clarification. The water settled readily and in some cases no after-precipitation was observed after boiling. The temperature of the water when treated averaged 40 deg. F.

At the same time that these treating plant experiments were being carried out at Burr Oak several tests were made to determine, if possible, the action of the water treated with aluminate of soda in actual practice as compared with that treated with iron sulphate. These tests were made on a switch engine by taking samples after the engine had completed one or two runs. While a different engine was used in the tests of the water treated with lime, soda ash and aluminate of soda than in that treated with lime, soda ash and iron sulphate, and while the latter tests were made a week later than the former, the results were considered significant.

They are reproduced in condensed form as follows:

Analyses of Boiler Waters

	With aluminate		With iron	
	Beginning	16 Hours	Beginning	16 Hours
Hardness	2.60	2.90	5.50	0.50
Alkali Sulphate	7.45	62.42	23.79	85.01
Total alkali	10.23	78.72	26.11	100.65
Total solids	12.85	81.62	30.61	101.15
Suspended matter	1.98	1.98	5.48	24.60

As the tests indicate, a much lower concentration of the alkali sulphate was found in the water treated with aluminate soda than in that treated with iron sulphate, as well as less matter in suspension.

Conclusions

The conclusions drawn from these experiments and included in the report of P. M. LaBach, engineer water service and T. D. Sedwick, engineer tests, are abstracted as follows:

Sodium aluminate solution is recommended for use in treating raw water in treating plants in conjunction with lime and soda ash, the soda ash being substituted in part for the sodium aluminate, the aluminate taking the place of alum or copperas at points where these chemicals are now used. The advantages gained by the use of sodium aluminate solution are: (1) increased plant capacity or output due to more rapid clarification or settling; (2) less total hardness without the necessity of carrying excess alkalinity and causticity which should, in turn, result in reduced trouble from foaming; (3) the avoidance of the increase of alkali sulphates in treated water resulting from the use of either alum or copperas; (4) the elimination or material reduction in the amount of after-precipitation which will result in (a) reduced trouble of pipe lines, heaters, branch pipes and injectors becoming clogged; (b) a material reduction in foaming troubles; (c) a decided reduction in the number of boiler washings.

The possible necessity of preliminary heating of the sodium aluminate solution by steam or some other agency preliminary to its use in cold weather was taken into consideration but the thought was expressed that this present drawback to the use of the solution can be avoided by improved methods of manufacture.

Crossing Gates Exhibited in New York City Safety Parade

Gates Were Shown in Motion

Valuation of the Kansas City Southern

$49,016,268 Found to Be Value for Rate-Making Purposes As of 1914

WASHINGTON, D. C.

THE INTERSTATE COMMERCE COMMISSION has issued a supplemental report in the Kansas City Southern valuation case, in which the supplemental tentative valuation issued on March 31, 1921, after certain corrections, is made final, as of June 30, 1914, and the final single-sum value of the property owned and used, and used but not owned, devoted by the Kansas City Southern system to common carrier purposes, is reported as $49,016,268, which is found to be the value for rate-making purposes. The report takes up and disposes of various contentions made by the railroad during the hearings, including particularly those as to the weight to be attributed to commercial or economic value and earning power, past, present and prospective, and, as in previous valuation decisions, says that a statement of the many considerations that have been controlling in the determination cannot be made in such a way as to indicate the weight which each member of the commission who participated has given to each of such considerations. The final figure is said to be one that "commends itself to our judgment."

Commissioner Potter filed a vigorous dissenting opinion, to which Commissioner Cox subscribed, repeating his criticisms of the commission, as expressed in previous cases, with respect to the "failure to make proper statement of principles, analysis and method." He also outlined a method by which he arrived at $60,000,000 as the figure of final value. Commissioner Eastman also dissented, saying that the rate base as of 1914, figured on the basis of reasonable investment, should not exceed $44,698,673. Commissioners Aitchison and McManamy did not participate in the disposition of the case. An abstract of the majority report and some extracts from the dissenting opinions follow:

Analysis of Methods

An anlaysis of the methods of determining original cost, of inventorying the property and fixing the unit prices, of ascertaining land values, of finding reproduction cost new and depreciated, and of readjusting the carriers' investment account is contained in the statement of methods in *Texas Midland Railroad,* 75 I. C. C. 1, incorporated in this proceeding by reference. No further analysis of the process of determining the aggregate values of the carriers' property can be stated as expressing the method of collective action by the commission. We are not, however, required by section 19a of the interstate commerce act to describe the methods by which the final single-sum value is fixed.

The determination of aggregate values for an entire railway system is a process of judicially weighing underlying elements of value in the light of the individual case. The value of a railway system can not be ascertained by the simple process of adding sums attributed to the many units of property, working capital, and a percentage conjecture as to a proper allowance for so-called intangible values. In the instant case original cost to the extent it is ascertainable as a fact, restated investment, reproduction new, and reproduction less depreciation are shown, and the present capitalization and the corporate history of the carriers are stated; and there is in addition an estimate by the carriers of the commerical or economic value of the property. These are checks, one upon the other. No one fact, cost study, estimate, or other factor can be said to be necessarily controlling.

As a commentary upon their protest in this regard, it may be observed that, although repeatedly requested to do so, carriers have failed to indicate how such analysis could be stated; and each of their witnesses, who testified as to a single-sum value for the property, expressed inability to separate the single sum suggested and attach a specified amount to each element of value he had considered.

Final Single-Sum Value

The carriers contend that we are required by the interstate commerce act to find as the single-sum value of their properties that amount which is protected by the Constitution of the United States against a taking of property without just compensation.

Commercial or Economic Value

They urge that the value of their property is the same for all purposes, consolidation, security issues, rate making, and recapture of excess earnings; and contend that this universal, regulatory, single-sum value is the pecuniary, commercial, or economic value. They have offered opinion evidence of different witnesses on this basis, but without detailed analysis of methods, to show a total value of their properties, tangible and intangible, ranging from $75,000,000 to over $80,000,000. The carriers' standard return was introduced in evidence to show that on the basis of the carriers' earning power during the three years ended June 30, 1917, the commercial value of their property would be from $49,284,714 to $53,259,747, as of valuation date, and from $54,284,714 to $58,-259,747, as of January 1, 1918.

The determination of the methods of valuation for regulatory purposes depends upon the use which is to be made of the resultant figure. Whatever the limitations may have been upon the original meaning of the term value, it is certain that at the time the valuation act was passed the term was generally used with recognized but widely varying meanings. Valuation for capitalization, consolidation, taxation, and rate-making purposes and estimates of exchange value can not all be made upon the same basis. In valuing a railroad for tax purposes it is immaterial to what use the property is put, and no segregation between carrier and noncarrier property is necessary. The value of the physical property is often the primary consideration. In determining purchase and sale values the aggregate value of the physical units becomes less important, and is controlling only where actual replacement or a substitute plant is feasible. The earning power of the property is the primary consideration in such a case. Similarly in condemnation cases, where the whole property, carrier and noncarrier, is taken, the franchise rights destroyed, earning power completely wiped out, and the legal title actually transferred, property value and earning power may be prime considerations. In determining value for rate-making purposes, where there is no transfer of title or destruction of franchise rights, and the property is used but not taken, determination of the fact that specific property is being used in rendering the common-carrier service for which rates are to be charged is of primary importance, and a segregation must be made between carrier and noncarrier property.

We conclude that a valuation under section 19a should be one which will serve for rate-making purposes, and one in which the value of the carrier property is segregated from that of the noncarrier property. Our reasons for this conclusion are more fully stated in *Atlanta, Birmingham & Atlantic Railway Co.,* 75 I. C. C. 645, and in *San Pedro, Los Angeles & Salt Lake Railway Co.,* 75 I. C. C. 463, and need not be repeated here.

Earning Power

A railroad system is not a freely transferable commodity with a recognized commercial value. Its economic value, like its other values, must be a matter of estimate, and the carriers suggest as criteria the capitalization of earning power and the market value of outstanding securities. The carriers contend that our tentative single-sum valuation is faulty in that it wholly ignores earning power, past, present, and prospective. Earning power is itself dependent upon rate making. It can not be estimated until the rate level has been fixed and the value upon which the carrier will be permitted to earn has been ascertained. To make it also the basis for, or a direct element in, valuation would in effect permanently capitalize against the public the profits from any maladjustment in rates, for having once fixed the values of the carriers' property solely on the basis of earning power, we could not thereafter reduce the earnings of the carriers for the reason that such action would automatically reduce such a value. If carriers' theory were correct it would follow that as earnings increase in the future, values must be raised on a higher basis to reflect the increased earning power. The result is obvious: A successive increasing of values to higher levels with corresponding increased burdens upon the users of railways without any greater capital investment by the carriers.

Most railways derive a part of their income from sources other than transportation operations, as, for example, interest on deposits in banks and on bonds owned, dividends on stock owned, rents of officers and other buildings, and so on. Such income can not be said

to represent railway property devoted to transportation purposes. If securities issued by other railroads were to be valued to a carrier which owns them, by capitalizing the income derived from them, a duplication of values would result, because the properties constructed or acquired with funds realized through the sale of such securities would necessarily be valued to the railroads issuing the securities, in a capitalization of their net earnings. Additional difficulties in connection with this theory of value arise from the necessity for auditing the carriers' accounts, particularly with reference to charges for expenditures for permanent improvements.

We do not believe that a valuation on the basis of capitalization of past, present, and prospective earning power is contemplated in section 19a of the interstate commerce act, or that the resulting figure would represent the value for rate-making purposes required by section 15a.

Stock and Bond Value

The carriers further protest the tentative single-sum values because, as construed by them, these findings of value have been made without regard to the so-called stock-and-bond value of the properties. They state that the aggregate market value of the carriers' outstanding stocks and bonds, computed at their average market prices during the alleged unduly low five-year period preceding valuation date, June 30, 1914, amounted to over $62,000,000.

Such a valuation bears little relation to the investment, or the value of the physical property, and is not separable on the carrier and noncarrier basis, for the market value of carrier's securities is based in part upon property not devoted to the public service. The stocks and bonds of a railway company represent the value of all the property of the company whether devoted to transportation or not, including lands, real estate in cities, mines, manufacturing plants, elevators, warehouses, stocks and bonds of other companies, etc. Such a valuation would generally directly reflect earning power, and therefore be subject to the same defects for rate-making purposes as a valuation based upon capitalization of estimated earning power. It might reflect control or possibility of control. It would have the defect of instability, for it would fluctuate with either or both rate-making or property value. It would depend in part not upon the value of the property, which we are required to find and report, but upon the corporation's financial policy as to dividends, improvements, the use of surplus, etc.

Other Elements of Value

The carriers protest against the tentative single-sum values for the additional reason that neither the supplemental nor the original tentative valuation contains any ascertainment or separate statemen of "other values and elements of value." They argue that such a finding is required by the interstate commerce act, and contend that the term "other values and elements of value" as used in the act means generally the intangible values which inhere in the physical property and increase its value to an extent depending upon its use. They argue that the evidence introduced by them tends to show intangible values of very considerable amount. These values, they contend, are measured, in a general way, by the difference between the value of its physical property, considered as such, and the total value of its entire property, considered as a railroad unit. They state that our alleged omission from the tentative valuation of any separate statement of such other elements of value has in effect deprived the carriers of their right to file protests as the law provides they may do.

All intangible elements of value properly attributable to the carriers' property in a proceeding such as this, when the object is to ascertain a value for rate-making purposes, were included in the tentative valuation, and inasmuch as we can find no other elements of value we see no justification for altering the tentative valuation in this respect.

The carriers contend also that we erred in finding a tentative single-sum value apparently based upon the cost schedules of record before definitely announcing our decision as to controverted issues under such schedules. As our conclusions upon these issues do not alter our previously announced findings of final values with respect to which the carriers have been heard by protest, testimony, briefs and argument, we can not see that the carriers have been prejudiced.

Telegraph and Telephone Lines

Our treatment of telegraph and telephone lines on rights of way of carriers in the *Texas Midland case*, and in the former report in this case, became the subject of considerable discussion, so that we assigned the matter for special consideration. Briefs were submitted on behalf of all interested parties. In accordance with our decision in *Inventories of Telegraph Property*, 84 I. C. C. 1, it is necessary to change our former conclusion in this case so that there will be included in the reproduction cost of the property of the Kansas City Southern system the cost only of those telegraph and telephone lines which are owned by the carrier. This results in a reduction of $98,603 in the aggregate cost of reproduction new and of $63,184 in the aggregate cost of reproduction less depreciation of the properties constituting the Kansas City Southern system, from the figures contained in the order entered herein on July 1, 1919.

Rights in Private Lands Wholly Owned and Used

In the order entered herein on July 1, 1919, the original cost of rights in private lands owned and used by the Kansas City Southern Railway Company for common-carrier purposes, is reported in the amount of $8,006. The present value of such rights is not clearly stated. We find that their present value is $8,505. The order to be entered herein will supplement the former order in this respect.

Working Capital

In the supplemental tentative valuation there was included in the single-sum values of the carriers' properties the aggregate amount of $1,352,139 for working capital. This is in excess of 20 per cent of the average annual operating expenses of these carriers for the five years immediately preceding date of valuation. Further investigation has convinced us that the needs of the carriers for working capital in connection with their common-carrier operations, as distinguished from their needs for capital in the form of cash and materials and supplies for investment in additions, betterments, and extensions, and in the form of cash for dividend, interest, and debt-retirement requirements, may be met by a substantially less amount than that stated in the supplemental tentative valuation. In our judgment the aggregate amount of $942,500 adequately represents the needs of these carriers for working capital, including materials and supplies. In the order to be entered herein the portions of that amount needed by each operating carrier will be set forth. Cash and materials and supplies on hand on valuation date in excess of this necessary amount for working capital, amounting in the aggregate to $409,639, are regarded for present purposes as noncarrier property.

A statement of the many considerations that have been controlling in our determination of the final single-sum value of the several properties which we have referred to as the Kansas City Southern system obviously can not be made in such a way as to indicate the weight which each member of the commission who participated in determining that value has given to each of such considerations. A statement as to what some of those considerations are, however, can be made by way of a summary.

Of the costs which section 19a of the act directs us to report, we have stated in detail the cost of reproduction new and the cost of reproduction less depreciation as of date of valuation. The actual original cost to date of each piece of property, for these properties as a whole, we have been unable to ascertain as a fact. We have, however, reported all original costs which we have been able to verify. These include original cost in detail of two of the carriers' properties, the Maywood & Sugar Creek and the Fort Smith & Van Buren, which own 1.939 and 2.419 miles of all tracks, respectively, leased to and operated by the Kansas City Southern. Neither of these carriers owns any equipment. Original costs reported also include such costs for nearly the entire acreage of lands purchased and for nearly all of the equipment in use on date of valuation. To the extent these original cost data are available we have given weight thereto.

Investment in road and equipment, restated in an endeavor to show the maximum outlay that has been made for the properties remaining in service on date of valuation, has been reported. This is not a figure which we are required by the act to report. But such investment is a fact which, in our judgment, ought to be given weight when reasonably determined. For the nine carriers whose properties are dealt with in this proceeding, the restated investment in road and equipment, including lands, is shown in the aggregate to be $47,946,116. The original cost of all lands held and used for common-carrier purposes, including certain noncarrier lands, costs of which can not be segregated, is $2,700,730.52. By deducting this figure from the restated investment there is given a remainder of $45,245,385 as the restated investment in property other than land.

Cost of reproduction new and cost of reproduction less depreciation for the properties of the nine carriers are $46,663,502[1] and $38,253,616[1], respectively. As explained in reporting the *Texas Midland case*, the prices used in making the reproduction-cost estimates were normal prices as of 1914, determined upon a consideration mainly of prices prevailing during the five years, and partly during the 10 years, prior to June 30, 1914. Portions of the properties under consideration were constructed during these periods, but for the most part were constructed at earlier periods.

It may be said, therefore, speaking broadly, that, upon the whole, costs of railroad building on valuation date did not differ greatly

[1]These figures have been revised in accordance with our determination to omit from the inventory of the carriers the estimated costs incident to reproduction of telephone and telegraph lines not owned by the carriers. There are included in these figures cost of reproduction new, $47,382, and cost of reproduction less depreciation, $38,565, of the property of the Bonanza spur, so called, which is owned by the Kansas City Southern, but is leased to the Missouri & Louisiana.

from those prevailing when these properties were under construction. This circumstance has been given weight in connection with a comparison of the estimate of cost of reproduction new, $46,-633,502, and the restated investment in property other than land, $45,245,385. The difference of only $1,388,117 tends to show in a general way that the investment as restated represents a reasonable and economical expenditures for creation of these properties.

The cost of reproduction less depreciation, $38,253,616, if increased by the addition of the present value of lands, $4,496,195, and working capital, $942,500, results in the sum of $43,692,311. If this figure is further increased by addition of the present value of certain rights in public and private domain employed in transportation service, approximately $42,955, it becomes approximately $43,735,266. If working capital in the amount of $942,500 be added to the restated investment, $47,946,116, including investment in lands, the sum is $48,888,616.

"A Figure That Commends Itself to Our Judgment"

The value we now ascertain is that of the properties under consideration for rate-making purposes, as heretofore stated. But the final-value figure is not the result of any mathematical process. It is rather a figure that commends itself to our judgment as a proper base upon which these carriers are entitled to earn a fair return.

Witnesses for carriers who testified as to the final single-sum value expressed opinions placing the value of the system properties at from $75,000,000 to $80,000,000. It is not clear that these men were confining the values stated to those of portions of the properties actually used in performing common-carrier service, as distinguished from all properties owned by the carriers. In any event they gave much weight to considerations such as earning power, going-concern value, and the market prices of stocks and bonds, and to numerous other considerations. We have referred hereinbefore to their contentions regarding these points.

These properties are being successfully operated and adequately maintained, and are satisfactorily performing necessary and important transportation service for the public. They are going concerns. To all of these facts we have given the weight that seems to us to be proper.

It is upon consideration of such matters as we have here briefly summarized as well as other considerations treated in more detail in preceding portions of this report, and in the preceding reports we have made in valuation cases, that we reach the conclusion and find that the aggregate value for rate-making purposes of the properties of these carriers owned and used and used but not owned, devoted to their purposes as common carriers, including $942,500 for cash working capital and materials and supplies, is $49,016,268. The distribution of this aggregate amount among the nine carriers comprising the Kansas City Southern system, as that term is used herein, is shown in the order entered in accordance with these conclusions.

The Motion for Rehearing

In its motion for a rehearing the carrier contends that the original cost of its property is largely in excess of the investment cost as determined in our tentative valuation report of July 1, 1919, the amount of such claimed excess being approximately $16,000,-000; that the cost of reproduction new is in excess by approximately $20,000,000 of the amount stated as cost of reproduction new in our tentative valuation report of that date; and that the amount of depreciation found in our said tentative valuation report is unjust and excessive. The matters and arguments therein contained were all before us and were considered when we made our original report on the final value of the carriers' property. No offer of further material evidence is made, and we see no advantage to be derived from a rehearing on these matters. The motion is accordingly denied.

Commissioner Potter's Opinion

POTTER, *Commissioner*, dissenting:

What I have said in previous cases with respect to failure to make proper statement of principles, analysis, and method applies to this case. There has been no effort to show how we do arrive at value. The carrier and all interested are left at sea as to what we have done and why we did it.

No one will contend that the process of valuation is so simple as to consist merely of the addition of certain elements of value and the application of arbitrary percentages to the result. Yet to determine "aggregate" value it is necessary to combine certain of the elements of value and in some way give appropriate influence to others. Nor will it be contended that the basis of value is solely earning power or the market value of outstanding securities. Yet these are elements of value which the highest judicial authority in the land has held must be considered in arriving at value. The use to which a carrier's property is put being of "primary importance" in determining "value for rate-making purposes," it is an element of value as to which we should reach reasoned judgment. It is our duty to determine and to announce how and to what extent our finding of final value is influenced by these and other considerations

Toward the close of the majority report a statement is made which purports to show the considerations controlling in the determination of final single-sum value. One set of figures adds present value of lands, plus an allowance for working capital to the estimated cost of reproduction new less depreciation. This results in the figure $43,692,311. Another set adds an allowance for working capital to the restated investment account, the resulting sum being $48,888,616. Final single-sum value is found as $49,016,-268. What influence is accorded to either set of figures does not appear. No combination of any of the figures given will produce the sum of final value found. The sum of restated investment and working capital means nothing unless the reason for combining them and the effect are explained. It is equally meaningless to add present value of lands, cost of reproduction new less depreciation, and working capital unless the resulting figure is held to reflect in some way the value of the property.

"We Are Authorized Only to Determine Value"

The language discloses error in the majority conception of our duty. It is not for us to determine the amount upon which carriers "are entitled to earn a fair return." The law does that in clear and positive manner. The amount is the "value" of the property, nothing different and neither more nor less. We are authorized only to determine value. When we determine value, the law determines that that value shall be the amount on which the carriers are entitled to earn a return. Seemingly we violate the law when we determine an amount on which we think the carriers should be allowed to earn a fair return and then arbitrarily call that amount value. There may be confusion between carrier cases and other utility cases where, perhaps, there is a different duty in ascertaining a rate base. Apparently there is confusion, too, between a basis for rate making and a base or amount on which a carrier is entitled to earn a fair return. It happens that under the valuation act and the interstate commerce act they are the same, but, except where this is required by statute, they need not be the same. It is not material to a particular carrier what the basis for rate making is if, in fact, the resulting earnings constitute a fair return on value.

If the law permitted it, there might be an arbitrary basis for making rates. It would not make much difference what basis or method is used. It might be original investment or prudent investment, or reproduction cost or something less. The important thing is that it be used frankly and only as a basis for rate making, and that it be not confused with value, or made the limit of the amount upon which the carrier is entitled to earn a fair return. The harm comes from calling it value.

Conceding for the purpose of argument that in the determination of value, it may be difficult to state the reasons for the determination, and the exact weight, as expressed in dollars, attached to considerations thought to be important, the determination of a rate base is an entirely different matter. In determining a sum different from value to be used as a basis for rate making the exact way in which it is done can be described. If it is the conclusion that the rate base shall be original cost and if that cost is the base employed, that fact can be stated. If it is the conclusion that the cost of reproduction new or cost of reproduction new less depreciation, with certain additions to represent the acreage value of the land and working capital is the correct base, that process is definite and susceptible of definition. If the thought is that "unearned increment" should not be included, that fact can be stated. If it is the thought that the rate base should be the value of the physical property as it existed on valuation date, with or without addition for other things, as for instance going-concern value or good will, there can be no objection to making our position clear, defining and stating what we allow or refuse to allow in addition to or by way of deduction from the present value of the physical property. The mind which creates a measure or structure of particular designs for a particular purpose must be able to state why it adopts its design and what the nature of that design is. At all events if what we are finding is a rate base we should not call it "aggregate value" or "final single-sum value."

If it be true that there are no principles to guide us in determining the weight to be given to all of the divergent and incompatible elements of value involved in a valuation proceeding, it is time that we establish them for our own guidance. There are such principles. The courts have been declaring them for years. Unless we apply them, *reasoned* judgment is impossible. The statement that agreeemnt upon the weight to be given to the different elements of value is impossible characterizes our finding as arbitrary, and upon that ground it is vulnerable. Reasonable rules reasonably applied are essential for valid conclusions.

In my separate expression filed in connection with *Petition of National Conference on Valuation*, 84 I. C. C. 14, I set forth in general what seem to me to be the principles to guide us in the determination of final single-sum value. In a later case, *Florida East Coast Ry. Co.*, 84 I. C. C. 40, I applied those principles to a carrier whose record showed that original cost harmonized closely with reproduction cost. Earnings of that carrier indicated a fair

return, present and prospective, upon investment. There was, however, no evidence of special efficiency or merit indicating that the value of the property as a whole should be considered higher than the investment cost. Under these circumstances I reached the conclusion that it would be appropriate to apply the prudent-investment rule of protection of expenditure. In the present case a different situation is presented.

Reproduction cost new is found to be $46,633,502 and, less depreciation, $38,253,616. Adding the allowance for working capital, $942,500, and the present value of lands, $4,496,195, to the foregoing items, respectively, produces $52,072,197 on the basis of cost of reproduction new and $43,692,311 on the basis of cost of reproduction new less depreciation. The restated investment account in property other than land shows $45,245,385. This added to the allowance for working capital and original investment in lands results in a total of $48,888,616. These figures compare with the $49,016,268 found as final value.

In contrast with the figures mentioned above it appears that the outstanding capital liabilities of the carrier on valuation date were $99,011,900. The aggregate market value of the outstanding securities averaged for the five years next preceding the valuation date was $62,173,595. True, these securities represent investment in noncarrier as well as carrier property. The noncarrier property of the carrier, however, as of valuation date consisted only of 61.37 acres of land acquired at a cost of $13,832; investment in affiliated or subsidiary companies, the value of whose property is included in the finding of final value in this case; and an item of $2,522,336 carried in the accounts as investment in other companies.

Another comparison is interesting. The carrier's standard return for the period of federal control was introduced in evidence to show that on the basis of the carriers' earning power during the three years ended June 30, 1917, the commercial value of their property would be from $49,284,714 to $53,259,747 as of valuation date, and from $54,284,714 to $58,259,747 as of January 1, 1918.

Earning Power

We are not at liberty to brush aside the facts as to the value of the outstanding securities merely because such value may be influenced by a variety of considerations which it is difficult to test. It is our duty to test them. Nor should we neglect earning power because we think such power may rest upon a fluctuating basis of rates and fares. Earnings arise not from rates and fares alone. Far more important is the location and usefulness of the property and its efficiency as a transportation machine.

The testimony in this case shows that the carrier on and about valuation date had a much lower operating ratio than that of any other carrier in the same territory. Such ration compares favorably with that of any other carrier in the country. It is shown that the carrier's traffic density was almost double that upon the lines of other carriers in that territory. The traffic of the carrier is well balanced in both directions and it has a large, steady, and staple tonnage. Its average length of haul is greater than that of any comparable carrier, and compares favorably with that of the various railroads of the United States. It is equipped with valuable terminals in the important cities reached by it with ample provision for future development. Its net earnings per mile of line for the year 1914 are more than double those of any of three other lines in the same territory and about 25 per cent higher than those of the remaining line.

The carrier has thus shown a high degree of present and prospective usefulness, efficiency, and merit. Its earning power rests securely upon these foundations. In my opinion the record warrants a finding of value in excess not only of original investment, but of reproductive cost. I have hesitancy in stating what the figure should be because we have not equipped ourselves for intelligent work by the adoption of principles. It is essential that individual commissioners in arriving at their several estimates of value apply the same methods and principles. There can be no soundness in final accord upon a figure unless the same principles are applied by all. Where several minds apply different and conflicting principles, with no disclosure of what they are, some of which in the nature of the case must be wrong, the finding, so called, can only be a jumble of guesses and can not be valid.

Necessity for Rules and Logic

There remains more than ever necessity for rules and logic in our action. It is apparent in this case that the carrier has been given some benefit resulting from efficiency, merit, strategic location, public service, earning showing, amount and value of securities, etc. It may be that depreciation, so called, has been ignored in part at least. It is unfortunate that the distinction between this and other cases is not fully explained in order that the public may in the future expect credit for merit and debit for lack of it. Why have we gone so far in this case, and why no farther? There must be a reason, and if it is sufficient it must be susceptible of statement.

The statement in the report that the weight given by each member of the commisison to different considerations can not be indicated, shows that there were differences of view. Did some apply one rule of law and others other rules? Did some deduct depreciation and others not? Did some think no depreciation had taken place, and did others think the property had depreciated in varying amounts? Did some attach importance to strategic location and others think the law did not permit this to be done? It will be noted that the majority did agree upon a final figure of $49,016,268. How this figure was agreed upon by commissioners entertaining different views on different questions is not stated. Does the figure represent an average of different views or compromises on different questions of law and fact? Weight is given somewhere to some fact which induced the adoption of a figure higher than one based on reproduction cost less depreciation, plus the value of lands and working capital plus the 5 per cent arbitrary.

In the final valuations that to date we have determined, it should be possible to see some rule of policy. While in the *Florida East Coast case* we apparently adopted the rule seemingly applied in our tentatve reports, and in the *Atlanta, Birmingham & Atlantic* dropped below it, and in the *San Pedro case* and in this case have gone above it, in none of the cases has the commission found a final value equal to reproduction cost. Whether it is the thought that in our reports we will fluctuate below this measure but never go above it should be made known, so that our policy can be reviewed as questions of law are involved. In so fluctuating, effect apparently is given to efficiency, strategic location, earnings, value of securities, etc., or some of them. If these considerations are to be given weight in ranking carriers up to the limit of reproduction cost, why shall not influence be given to the same factors above that limit? If we can not explain why we adopt the different rules in different cases, our findings taken together appear to be only guesses without substantial support. Proper exercise of our function must contemplate something more than a compromise of vague impressions.

Notwithstanding my view that the commission should announce principles and method of analysis for the guidance of us all before individual commissioners attempt to arrive at a conclusion as to final value, it will perhaps be helpful toward a clarification of the situation if I apply to this carrier and to another, for purposes of illustration and comparison, the method I think we should follow and suggest a figure of final value. The first thing to do is to determine upon some point or line from which to start. We must in all cases, as I see it, start either with original cost or reproduction cost. The commission should decide which, but it has not. Cost, original or of reproduction, furnishes a presumption of value upon which to begin, such presumption being rebuttable according to the showing of resulting merit or lack of merit. I think that in this case we should start with reproduction cost for the following reasons. The carrier is essential. Its construction on the basis of reproduction cost would be justified. It is efficient, as has been demonstrated by its operating showing. It was well conceived, and enjoys valuable strategic location. It renders vast public service. It stands out among the carriers in its section as having exceptional merit. It deserves to be recognized as a successful and profitable venture and has been so recognized by the investing public. It should earn at least a return on reproduction cost on any basis of rates that would support carriers generally. It has been well maintained and has suffered no depreciation that affects value or that is not taken care of in the usual course as an operating expense. On the contrary, settling, etc., has brought about appreciation. These are matters of fact on which the commission should vote and make and announce findings. Conclusions to be drawn from the facts found should similarly be announced. I think it clearly demonstrated that the value of this carrier, as of valuation date, was certainly not less than it would have cost to reproduce it as of that date. Looking at the record of earnings as indicating degree of efficiency and public service affecting value, it appears that during the year preceding valuation date the carrier earned 6 per cent return upon $58,589,333. The studies made by the carrier relative to prospective earnings based upon cost showings and conditions prevailing on valuation date, indicate a prospective return on from $74,000,000 to $82,000,000. These studies reflect large potential value in the property as of valuation date. They warrant the conclusion that $1 of expenditure to reproduce a unit would have a greater value than $1. For this property there is indicated a greater value than of one less advantageously located or which, because of higher operating costs, showed a lower return upon the same volume of traffic. The estimated cost of reproduction plus value of lands, and working capital, is given in the report as $52,072,197. The merit of the instrumentality demonstrated by its past and prospective earning showing would, in my judgment, increase the value of such an investment to at least $60,000,000.

In confirmation of a figure of $60,000,000 as the final value, it is to be noted that the aggregate market value of outstanding securities, averaged for the five years preceding valuation date, is about $62,000,000. This figure furnishes public estimate of value and relative value, the use of which is sanctioned and required by the

courts. While this figure represents an interest not only in carrier but in noncarrier property, the value of the latter would appear not to exceed $3,000,000. The application of judgment to this property, its characteristics, showing, and its various elements of value, reflecting usefulness, efficiency, and merit, leads me to the conclusion that we should find on the present record that the figure of final value is at least $60,000,000. A change in this figure might be required upon a further showing had the carrier been permitted to make it. If all commissioners applied the principle and method which I have used they might arrive individually at different figures of final value and the figure to be found by the commission might properly represent a compromise of views. Such a compromise would be proper where several men act together. There may not, however, be compromise among commissioners on the principles to be applied. For several commissioners to arrive at a figure of $49,000,000 because they think depreciation should be deducted, and for other commissioners to arrive at $49,000,000 because they think depreciation should not be deducted, but something else should, is without principle and illegal.

Comparison with A. B. & A.

For comparative purposes and to show how the method which I suggest could be applied with consistency to properties of different merit, I again refer to the *Atlanta, Birmingham & Atlantic case.* The test applied to the Atlanta, Birmingham & Atlantic would have shown the following. That carrier is not essential. Its construction on the basis of reproduction cost or even original cost, was not and could not be justified. It is inefficient, as has been demonstrated by its operating showing. It was ill-conceived, and suffers the disadvantage of poor location. It renders relatively inconsequential public service. It does not deserve and never has deserved to be recognized as a successful or profitable venture. It has never been so recognized by the investing public. It stands out among the carriers in its section as one of exceptional demerit. Its value, therefore, as of valuation date was certainly much less than it would have cost to reproduce it as of that date. Its record of earnings and selling prices of securities rebut any presumption of value springing from its cost and demonstrate that its value is much less. The logical conclusion is that the value of the Atlanta, Birmingham & Atlantic was not much, if any, in excess of its scrap value.

It is unfortunate that the report does not disclose the majority's definition of "value." It disregards value and states only a figure upon which, in disregard of value, for reasons not given, it is thought the carrier should be allowed to earn a fair return. The report does reject, as a definition of value, "original cost," "prudent investment," "reproduction cost," both entire and depreciated, "value of securities," and "earnings capitalized." In my judgment, according to any concept of value based on law, experience, commerce, economics, public policy, or morality, the value of the Kansas City Southern is from every aspect more than five times as great as the value of the Atlanta, Birmingham & Atlantic. If the latter has a value of more than $20,000,000, the former has a value of more than $100,000,000. If the former has a value of less than $50,000,000, the latter has a value less than $10,000,000.

The duty imposed upon us to find "value" harmonizes with the fundamental law. Legislative bodies may regulate the use of property based on value. They may not determine value. The legislative power to fix the amount of compensation is not power to prescribe what does not compensate. Less than compensation is confiscation, and if attempted would be overturned. To fix compensation for the use of property at less than fair return on value is to take property without compensation, not regulate its use. So, while conceivably a basis for making rates different from value might be used, if it assured at least a fair return on value, it is obvious, particularly in view of the provisions for the recapture of excess earnings, that our task should be to determine value and not prescribe a rate basis. The two functions diametrically differ and are separate. In determining value we exercise judicial power under supervision of the courts. In fixing rates our function is legislative. In my opinion to base our findings on original cost or reproduction cost, but rank some carriers above the line and some below according to relative merit with full explanation for such ranking in each individual case, would be reasonably definite and comply with the law. A rigid rule which does not recognize individual merit or demerit would discourage enterprise and work injustice. Such a rule now applied would confiscate values which have been created in reliance upon past and present laws. A policy which, attempting to use the judgment method, in fact accords in the main predominating influence to an arbitrary rule, with no explanation of departures, is indefensible.

It makes difference in fact and law whether in valuing this property we take the figure of approximately 49 millions or a figure of 45, or 40 millions, or less, or 50, 55, 60 millions, or more. There must be some way to test what we do, and we must furnish that test. We may not act arbitrarily, and yet, unless we explain what we do and why we do it, there is absolutely no way to correct any error which we make. Where 40 millions would be right, 60 millions would be wrong, and yet the theory of our work is that either 40 or 60 millions becomes right because we name it. It can not be possible that we are so immune from the discovery of error.

It would be far better for all concerned to find an aggregate value of the railroad properties of the United States of substantially less than $20,000,000,000 distributed so as to reflect the actual relative values than to find an aggregate value of much more than $20,000,000,000 based upon an unjust and fictitious measure of reproduction cost. If we were to approach our task of valuation so as to accord full influence to all of the factors which affect value and give less influence to original cost or reproduction cost when these elements fail to reflect the actual value of the property, we would stand on firmer ground and better serve carriers and shippers. The values we are finding do not constitute proper bases for rates, for the issue of securities, nor for recapture of excess earnings under section 15a of the act.

Commissioner Eastman's Opinion

EASTMAN, *Commissioner* dissenting:

In the *San Pedro case,* I expressed the view that so-called value for rate-making purposes should be based on the amount invested honestly and with a reasonable degree of providence in the existing property. The majority estimate the investment in road and equipment, including lands, for the nine carriers whose properties are dealt with in this proceeding, as $47,946,116 at the maximum. By comparison with estimated cost of reproduction new they also reach the conclusion that this amount "represents a reasonable and economical expenditure for creation of these properties." I am willing to accept this conclusion. But it is the properties existing on valuation date which we are considering, and the majority estimate the aggregate losses through depreciation as $8,379,886. Deducting but one-half of this sum, for the reasons indicated in my opinion in the *San Pedro case,* I arrive at $43,756,173, as a liberal approximation of the reasonable investment remaining in the properties as of June 30, 1914. Adding $942,500 for working capital, the rate base as of that date should not exceed $44,698,673.

Inasmuch as this is the fourth valuation case decided since the way was blazed in the *San Pedro case,* certain comments on the general subject may not be inappropriate. The majority have followed a consistent course. After ascertaining and considering various facts in regard to the properties, they "reach the conclusion and find" that the value for rate-making purposes is a certain sum. No attempt is made to chart the path by which the conclusion is reached or to indicate the weight given to any particular fact. A quite different sum might be substituted, as the value for rate-making purposes, without changing in any way the discusison which leads up to and is presumably intended to support the finding.

Relation of Recapture

In the instant case, one of the chief claims urged by the Kansas City Southern is that it is one of several competing routes between Kansas City and the Gulf and that, by reason of its superior location, it earns relatively larger profits out of the rates necessary to sustain the group than do its competitors. Assuming this to be the fact, it is to precisely such situations that the recapture clause was intended to apply. Formerly the rates of the Kansas City Southern could lawfully have been regulated without regard to the competing routes, but such a course might not have served the public interest. Now the rates of all the routes may be dealt with as a group, and at the same time excess earnings of the Kansas City Southern may be recaptured for the public benefit.

The question is whether the fact that these and other forms of public regulation were not exercised in the past may properly add to the "value" which determines the confiscation limit for the future. It must be evident that an affirmative answer to this question would go far to defeat the purposes which the provisions of the present law with respect to divisions and recapture were intended to accomplish. They were aimed to improve the condition of the weaker roads in the interest of an adequate national transportation system. The earning-power doctrine would confine this process within narrow limits by basing value upon earnings in the past which might have been transferred to weaker roads or recaptured if the present law had been in effect. This doctrine, to have any degree of validity, must be based upon one of two premises either upon the premise that because the government has permitted favorable earnings in the past it is estopped from interfering with similar earnings in the future, or upon the premise that natural conditions exist which make such prospective earnings inevitable regardless of public regulation. Both of these premises are wholly untenable.

Summing up the matter without further illustrations, which might be multiplied indefinitely, the exchange-value or earning-power method of fixing the confiscation limit, if consistently applied, would impose handicaps upon parts of the national railroad system which are now beset by misfortune that would retard, if not prevent, recovery. At the same time it would confer benefits upon more fortunate parts that would effectively curtail, and perhaps eliminate, the relief to the public and the weaker roads which they ought to

afford and which the transportation act contemplates. It would also impose upon this commission a continuing duty of administering various confused principles of valuation which would be impossible of real performance. In practical operation the result would probably be that the more prosperous carriers would receive the full benefits of the theory, while its consistent application in the reverse direction would be avoided, except in the case of a few woebegone and friendless properties, by a subtheory that the minimum "value" of an "essential" railroad should be its original cost or cost of reproduction new.

It should always be borne in mind that we are engaged, as I have already indicated, merely in fixing confiscation limits. The fixing of such limits in no way forbids or prevents public regulation that will afford suitable recognition to efficiency or noteworthy public service.

The more the subject is discussed the more I am persuaded that the only just, reasonable, stable, and practicable basis for the public regulation of industries that are subject to such regulation by reason of the public interest with which they are affected, is the honest and prudent investment remaining in the existing property. Those who make such investments are entitled to an opportunity to earn such a return upon every dollar which they invest as may be necessary to attract additional investment, whatever the immediate prospect of realizing the fruits of that opportunity may be. And they are fairly entitled to no more.

I may add that there is no reason why "value for rate-making purposes," so determined, should not also be "value" for recapture, for capitalization, and for every other purpose now specified by the interstate commerce act. Indeed the reasons why these values should be the same seem to me to be obvious.

Revenue Freight Car Loading

WASHINGTON, D. C.

FREIGHT CAR LOADING continued to decline during the week ended June 7, when the total was 910,707 cars, a decrease of 101,605 cars as compared with the corresponding week of last year, although an increase of 74,499 cars as compared with 1922. This was also lower than the loading for the two middle weeks of May, preceding the holiday week of May 31. Loading in the Southwestern district continued to be above that for the corresponding week of last year but all classes of commodities showed decreases except grain and grain products. The largest decrease was in coal, which however, showed an increase as compared with earlier weeks of this year, but there was also a reduction of 28,000 cars in miscellaneous freight and of 15,000 cars in ore. The summary as compiled by the Car Service Division of the American Railway Association follows:

REVENUE FREIGHT CAR LOADING—WEEK ENDED JUNE 7, 1924

Districts	1924	1923	1922
Eastern	216,182	251,885	188,529
Allegheny	187,812	226,183	160,522
Pocahontas	40,670	41,786	43,721
Southern	126,256	132,602	129,363
Northwestern	148,275	166,633	142,954
Central Western	135,574	136,815	118,260
Southwestern	57,938	56,408	52,799
Total Western	339,787	359,856	314,013
Commodities			
Grain and grain products	39,238	34,409	39,977
Live stock	30,890	31,953	29,553
Coal	143,353	189,765	94,673
Coke	7,916	14,870	8,973
Forest products	68,991	76,385	60,607
Ore	60,828	76,385	60,607
Mdse l.c.l.	241,368	242,710	246,014
Miscellaneous	318,123	346,132	310,889
Total	910,707	1,012,312	836,208
May 31	819,904	932,684	739,559
May 24	918,213	1,015,532	806,877
May 17	913,407	992,319	780,953
May 10	909,187	974,741	767,094
Cumulative total January 1 to date	20,471,942	20,970,311	17,442,444

Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended June 7, totaled 58,826, an increase over the previous week of 176 cars. Grain fell off in the Eastern division 1,202 cars, but ore increased 632 cars, and coal, lumber, pulpwood, other forest products and miscellaneous freight showed increases. In the Western division the grain loading showed little change; lumber, forest products, merchandise and miscellaneous showed increases giving a net increase of 447 cars. Compared with the corresponding week last year there was an increase of 5,299 cars which was all in the Western division, the Eastern division showing a slight decline.

Car loadings by commodities for three weeks follow:

	For the week ended		
		1924	
Commodity	May 24 Cars	May 31 Cars	June 7 Cars
Grain and grain products	9,165	11,747	10,607
Live stock	2,152	2,428	2,131
Coal	4,157	4,832	4,973
Coke	155	256	176
Lumber	3,928	3,839	3,964
Pulp wood	2,204	2,097	2,195
Pulp and paper	1,998	1,981	1,917
Other forest products	2,015	2,400	2,636
Ore	1,088	1,262	1,946
Merchandise l.c.l.	14,146	15,529	15,528
Miscellaneous	12,250	12,279	12,753
Total cars loaded	53,258	58,650	58,826
Total cars received from connections	31,292	29,787	28,256
Total cars loaded same week, 1923	50,048	54,484	53,527
Cumulative loading to date—1924			1,225,803
1923			1,120,565

Surplus Increases

The freight car surplus during the period June 1 to 7 showed a further increase to 256,723 cars, for the railroads of the United States, including 146,271 box cars and 172,311 coal cars.

For the Canadian roads the surplus was 20,450 cars, including 17,975 box cars and 150 coal cars.

I. C. C. Not to Slow Up Valuation Work

WASHINGTON, D. C.

PRESIDENT COOLIDGE has approved a plan which will obviate the necessity for a sharp curtailment in the work of the Bureau of Valuation of the Interstate Commerce Commission as a result of the failure of the Senate to pass before adjournment the conference report on the deficiency appropriation bill which carried a supplemental appropriation of $350,000 for valuation work. The commission's regular appropriation, including $647,000 for valuation work, was passed, but on representations from the commission that this amount would require a curtailment of its work and a reduction of its valuation forces from about 425 employees to about 244, at just the time it was desirable to devote special attention to bringing up to date the valuations of roads believed to be near the recapture point, the President had recommended the additional item which was in the bill as it passed both houses of Congress, but which was not made available because of the filibuster conducted by Senator Pittman in the closing hour of the session, against the conference report on the bill.

Under the plan approved the commission will apportion the expenditure of the $647,000 which has been appropriated so that $255,000 may be used in each of the first two quarters of the fiscal year ending June 30, 1925, and $90,000 and $47,000 respectively in the next two quarters. This will make it possible to proceed with the work during the next six months at about the same rate of expenditure as would have been allowed if the total of $997,000 had been appropriated, without actually spending any money that has not been authorized by Congress. It is assumed that Congress in December will pass the bill so as to fill out the amounts available in the second half of the fiscal year, as there was no objection to the valuation item in the bill. If Congress should fail for any reason to pass the bill the commission would almost have to close up its valuation work, but the plan adopted will make it possible to continue the employment of a force of about 400.

Journal Lubricating System

The Phee system of journal lubrication, a recent development of the Froedtert Equipment Corporation, Milwaukee, Wis., is now being tested on three important mid-west roads and these tests promise to be of more than ordinary interest in view of the lubrication results obtained.

The construction and operation of the device are clearly shown in the drawing, Fig. 1 and the photograph, Fig. 2.

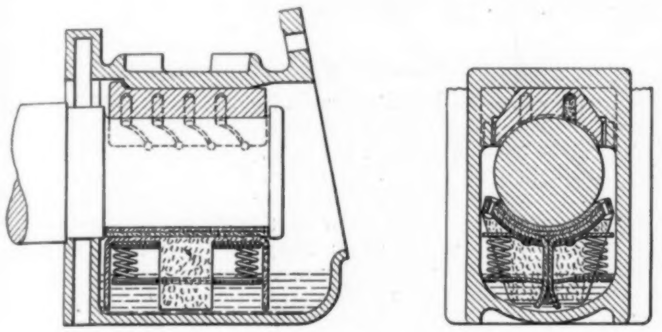


Fig. 1

A metal plate resting on the bottom of the journal box supports the upper portion of the device by means of six springs. The upper portion consists of two metal plates supporting three layers of wool felt, 3/8 in. thick. The bottom layer of felt projects at each end sufficiently to drop down to the bottom of the box, and two additional strips of felt project downward to the bottom of the box through the center of the metal plates. The top two layers of felt are 1 in. shorter than the journal bearing surface to allow for lateral movement. Thus the layers of felt when in position are held in contact with the bearing surface by means of the springs. In addition to this, the brass, which is of the standard type, has a series of holes 3/8 in. in diameter and 5/8 in. in depth, drilled along each side, connected by channels 1/8 in. in depth as shown in Fig. 2.

The installation of this device is said to require no alteration in the construction of the present standard journal box. It is simply inserted in place of the oil saturated waste. Before inserting, the spring and felt devices are thoroughly saturated with car oil. About two quarts of free oil are added to the box after placing the spring and felt device in position.

Oil is fed to the bearing surface by the pad which is in contact with the journal. Additional oil is fed to the pad as required by the four wicks which dip in the free oil at the bottom of the box. These wicks have a three-fold action: they feed oil to the pad, filter the oil as it passes up, and act as a guard at each end, preventing foreign matter from coming in contact with the bearing surface. The purpose of grooving and drilling the brass is mainly to insure a plentiful supply of free oil to the bearing surface during the time required to wear the brass to a perfect bearing seat.

The following results are reported of a test of 12 of these devices applied March 1, 1924, to a car in passenger service making a run of 190 miles a day. "The journals on this car are 4¼ in. by 8 in. in size. On April 1 this car was inspected after a total run of 5,980 miles and the spring and felt devices were in excellent condition, the felt showing only slight signs of wear; the running temperature of the journals was lower than on those lubricated by waste and oil; and there was no indication of hot journals. On May 3 this car had made a total run of 11,970 miles with no attention whatever. No additional oil had been added since installing the devices and apparently the car was in condition to run several thousand miles further before it would be necessary to add more oil. One of the boxes on this car was defective to such extent that it would not hold oil, and the car ran over 5,000 miles with no free oil in the box, sufficient oil being contained in the felt pad to lubricate the journal

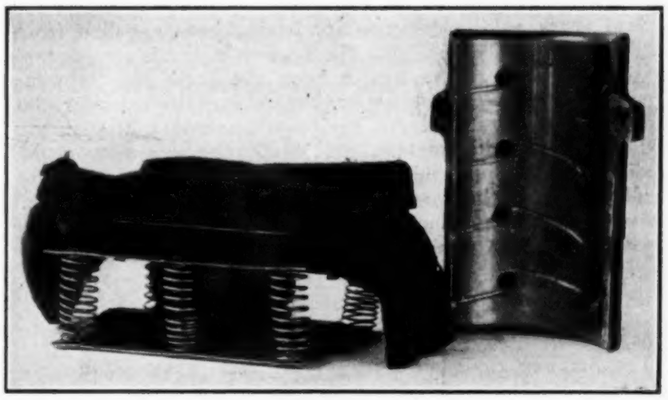
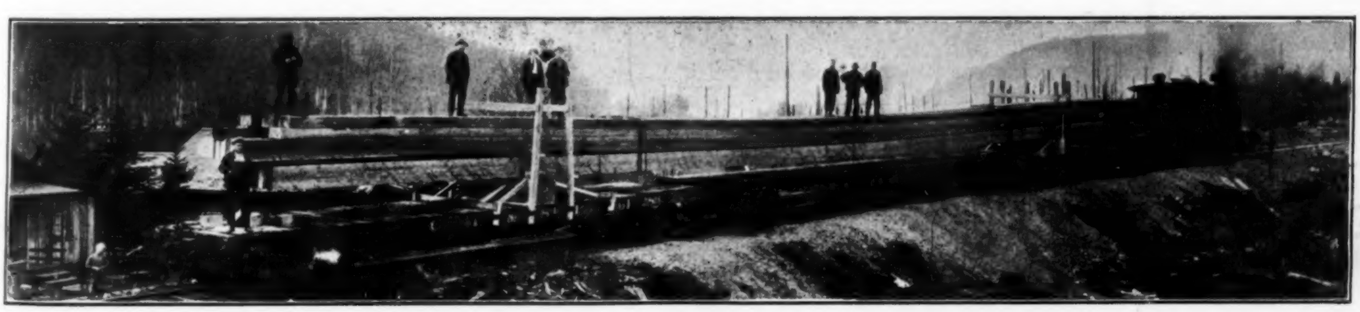


Fig. 2

properly. The device is said to operate as successfully under winter as summer conditions."

The tests up to the present time apparently indicate that a considerable saving in oil and labor can be effected by the use of this method of lubrication. One of the greatest claims, however, is that it will eliminate the trouble caused by hot boxes, the actual cost of which, while very difficult to estimate in dollars and cents, is of considerable extent when the delay to the train, loss of revenue by setting out the car, labor and loss of material due to destruction of the journal, brass, waste and oil, are all considered.



Douglas Fir Timbers, 128 ft. Long, for Barge Construction at Kanauga, Ohio

Shipped by Pacific National Lumber Company, Tacoma, Washington

General News Department

Of 6,184 locomotives inspected by the Bureau of Locomotive Inspection of the Interstate Commerce Commission during May, 2,931 or 47.4 per cent were found defective and 382 were ordered out of service, according to the Interstate Commerce Commission's monthly report to the President on the condition of railroad equipment. The number ordered out of service was less than had been reported in any month since January 1, 1923, with the exception of December.

A flood in Eastern Tennessee on June 14 causing a dozen or more fatalities, did serious damage to railroads in the region east of Johnson City. The Southern Railway's tracks were badly damaged between Fish Springs and Mountain City, and on the Laurel Fork Railway, a lumber line extending 15 miles southeast from Hampton, there were serious washouts. The East Tennessee & Western North Carolina was blocked for several miles south of Hampton.

J. W. Green, locomotive engineman, who has been suing the Brotherhood of Locomotive Engineers in the courts for several years, asking damages for having been expelled from the brotherhood, reports that the verdict in his favor secured in the lower court has finally been sustained, the Supreme Court of the United States having refused to consider the appeal which was made to it; but, the amount of damages will be $12,500, with interest, not $40,000, the sum allowed the plaintiff by the jury in the trial court. The action of the brotherhood, in the case of Green, was based on his refusal during war time to obey an order to strike, Green taking the position that he would not quit his job until the close of the war.

City Cannot Force Shops to Stay

The Supreme Court of Missouri has decided against the city of Cape Girardeau in its suit asking for an injunction to compel the St. Louis-San Francisco to maintain and operate its repair shops in that city. The court affirmed the principle, established in previous cases, that municipalities have no power permanently to fix conditions of operation upon a railroad or public utility, in the terms of franchises granted. One justice dissented from the decision.

Railroad Owners' Association

This is the name of an organization which was tentatively formed at a meeting held in New York City on Wednesday, June 18, following an informal call sent out by J. V. Ryan, of the National City Company.

An organization committee was chosen consisting of Floyd Mundy, J. D. Shatford, A. S. Pierce, Frederick Halsey and J. V. Ryan. It is proposed to secure a membership in every large city in the country and to enlist the interest of the one million railroad stockholders in the United States.

Train Robbery at Rondout, Ill.

Armed bandits on Thursday night, June 12, held up a northbound mail and express train on the Chicago, Milwaukee & St. Paul two miles from Rondout, Ill., which is 30 miles north of Chicago, and escaped in four automobiles with 42 pouches of registered mail containing money and bond shipments estimated at $1,000,000 in value. The bandits showed considerable knowledge of the mail cars, their contents and their destination, the leader of the band making a specific demand for a certain payroll shipment addressed to a Montana bank. It appears that one of the band rode the blind baggage out of Chicago and caused the stopping of the train as it approached the point where the robbery was staged. Here a large number of men forced the postal clerks of two mail cars to open the doors by throwing a tear bomb into the car. Gas masks were employed by the bandits in entering the mail cars and were later abandoned, as was a quantity of nitro-glycerine. The train consisted of 11 cars, nine of which carried mail and the remaining two express shipments. A part of the bags were found near Joliet, and six men have been arrested.

Rock Island Foreign-born Employees

The Chicago, Rock Island & Pacific is working on a plan whereby all unnaturalized employees will be given two hours instructions per week in reading, writing, English speaking and the study of the Constitution of the United States. Classes will be formed at various division points and a course of study will be given extending over a period of approximately 28 weeks. In Chicago the work will be carried on in co-operation with the assistant superintendent of schools in charge of Americanization, and at other points on the system similar arrangements are being made through the local boards of education for the instruction of the classes in American citizenship. Under the plan all foreign born employees who have not done so will be urged to make application for citizenship immediately. At the end of the course of instruction these employees will be given an examination by an inspector from the United States Naturalization Board and, if satisfactory, will receive a diploma. At the end of five years' residence in the United States these diplomas may be presented at any federal naturalization office and will admit the employee to full citizenship without further examination.

G. N. DeGuire Now With Empire Trust Company

G. N. DeGuire, manager of the Department of Equipment of the United States Railroad Administration, has resigned to become connected with the Empire Trust Company of New York City. This company is associated with the Brotherhood of Locomotive Engineers' Bank.

G. N. DeGuire

Mr. DeGuire was born in Appleton, Wis., March 31, 1884, and was educated in the public and high schools of that city. In 1902 he entered the service of the Chicago & North Western as locomotive fireman, and was promoted to the position of locomotive engineer in 1906; for ten years thereafter he served as locomotive fireman or engineer in accordance with the demands of the service, with the exception of three years which were devoted to making a study of locomotive and car construction; also shop, enginehouse, and railroad operation in general in various parts of the United States. In 1916, he received a civil service appointment as inspector of locomotives with the Interstate Commerce Commission. On January 1, 1918, he entered the service of the United States Railroad Administration as supervisor of railroad equipment. On June 1, 1918, he was promoted to general supervisor of equipment for all lines east of Chicago, and on February 1, 1919, was given jurisdiction, in the same capacity, over all lines under federal control in the United States. At the termination of federal control, Mr. DeGuire was appointed assistant manager, Department of Equipment, Division of Liquidation Claims of the United States Railroad Administration. He was promoted to the position of

manager of this department July 1, 1923, succeeding Frank McManamy when the latter was appointed a member of the Interstate Commerce Commission.

American Association of Railroad Superintendents

This association held its thirty-first annual convention at Hotel Statler, Buffalo, N. Y., on Wednesday, Thursday and Friday of this week, with an attendance of about 250. Features of the first session were an address by R. H. Aishton, president of the American Railway Association, and the election of officers. The annual dinner was held on Wednesday evening at which addresses were made by P. E. Crowley, president of the New York Central, and Elisha Lee, vice-president of the Pennsylvania. The attendance at this dinner numbered over 800.

The president for the ensuing year is E. H. Harman, superintendent of the Terminal Railroad Association of St. Louis; first vice-president, G. O. Brophy, superintendent of the Union Pacific, at Kansas City; second vice-president, J. M. Walsh, superintendent of the Yazoo & Mississippi Valley, at Memphis; secretary-treasurer, J. Rothschild, Terminal Railroad Association of St. Louis, St. Louis, Mo.

Further doings of the convention will be reported in the *Railway Age* next week.

Leading Business Publisher Dies

Horace Monroe Swetland, president of the United Publishers Corporation, and one of the leading business paper publishers of the country, died at his home in Upper Montclair, N. J., on June 15. He had been in poor health for several months. He was 71 years old. At the time of his death, besides being president of the United Publishers Corporation, Mr. Swetland was also president of the Class Journal Company, president of the Federal Printing Company, president of the U. P. C. Realty Company, and the Swetland Realty Company, all of New York. He was also president of the National Publishers Association and chairman of the educational committee of the Associated Business Papers, Inc. Mr. Swetland was born in Allegheny County, N. Y., November 16, 1853, and started in life as a school teacher at the age of 17. In 1881, he went to Boston as a reporter on the Boston Journal of Commerce and was later in the subscription and advertising departments. He entered the business paper field in 1884 as Boston representative of Power and later came to New York as manager of that publication. In 1888 Mr. Swetland purchased Power and ran it for 12 years, when he sold it to John Hill. While he was still publishing Power he, with H. L. Aldrich, started Marine Engineering, which was taken over by Mr. Aldrich about a year later. This is now one of the publications of the Simmons-Boardman Publishing Company under the present title of Marine Engineering and Shipping Age. In 1902, Mr. Swetland purchased The Automobile and consolidated it with the Motor Vehicle Review. A year later he acquired the Dealer and Repairman and the Automobile Magazine. The Automobile Blue Book was purchased in 1904. The next important step was the purchase of Motor Age in 1907. In the same year he founded the Commercial Vehicle, now known as Motor Transport. In 1912, Motor World was purchased and El Automovil Americano, printed in Spanish, was started in 1917. It was in 1911 that Mr. Swetland joined with others in forming the present United Publishers Corporation, of which he continued as president until his death. The United Publishers Corporation is the parent company of the group which publishes the Iron Age, the Dry Goods Economist, Automotive Industries and about twenty other weekly or monthly industrial and business papers.

H. M. Swetland

Traffic News

The Missouri-Kansas-Texas has issued a bulletin containing statistics for the 10-year period from 1913 to 1923, inclusive, to show the effect of automobile transportation on its passenger traffic and particularly in its local travel. In 1923 the road carried 30 per cent fewer passengers than in 1913. This decrease was due to a falling off in local travel as is shown by the fact that the average passenger journey increased 62 per cent.

The Glenmore & Western Railway, extending from Tuttle, La., to La Compte, 23 miles, has been indicted by the Grand Jury in the Federal Court at Alexandria, La., for alleged discrimination in the distribution of cars to lumber shippers; and the W. M. Cady Lumber Company was indicted for illegally accepting the benefit of the discrimination. W. M. Cady, president of the railway company and also president of the lumber company, was also indicted. This railway is operated for freight traffic only.

The Southeast Shippers Regional Advisory Board held its first annual meeting at Atlanta, Ga., on June 10. Among the speakers were M. J. Gormley, chairman of the car service division of the American Railway Association, A. G. T. Moore, traffic manager of the Southern Pine Association, New Orleans, La., Donald D. Conn, manager, Public Relations Section of the American Railway Association, Lincoln Green, assistant to the president of the Southern, and James A. Emery, general counsel of the National Association of Manufacturers, Washington, D. C. The board voted to follow the policy already adopted by similar boards in other parts of the country and make every effort to induce the public to buy their winter supply of coal early as well as to move other commodities where possible, before the fall rush. It was estimated that car requirements for miscellaneous commodities for the next three months will be approximately 85 per cent of those for the same period last year. Two new committees were created; tobacco and textiles. Thomas J. Burke, commissioner of the Charleston Traffic Bureau, Charleston, S. C., was elected secretary of the board to succeed A. S. Lucas who resigned to accept the position of general agent of the Mississippi Central and the Louisiana & Arkansas.

Great Lakes Shippers' Regional Advisory Board

This board held its annual meeting at Toledo, Ohio, on June 9 with an attendance of 275, more than half of whom were railroad men. Reports were made by all of the principal commodity committees. Domestic consumption of coal is now light; the committee recommends buying at once to eliminate congestion later. Movement of ore is lighter than was expected. Improvement was reported in retail merchandise and building lines with reduction of unemployment in those lines. The inter-regional committee reported 38 major complaints having been disposed of satisfactorily. Perishable freight service is now satisfactory and shippers and consignees are promptly releasing cars. California fruit crops will be lighter than last year, because of dry weather.

Livestock shippers reported improved service by the carriers in supplying stock cars. Lumber shippers will require not more than two-thirds as many cars as last year; certain Michigan railroads are complained of as not co-operating with lumber producers. Petroleum shippers ask that tank cars be steamed after being used for acid.

The meeting was addressed by W. L. Ross, vice-president of the New York, Chicago & St. Louis and by Chairman Davis of the Ohio Valley Shippers' Advisory Board.

L. G. Macomber of Toledo, Ohio, was elected chairman for the ensuing year and F. H. Baer of Cleveland, Ohio, was elected secretary.

The next meeting is to be held at Detroit, Mich., on Tuesday, August 12.

THE SHOPS of the Chicago, Burlington & Quincy at several points, including Denver, Colo., Havelock, Nebr., and Aurora, Ill., were shut down on June 16 to remain closed until July 1.

Freight Operating Statistics of Large Steam Roads—Selected Items for April, 1924,

Region, road and year		Average miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (thousands)	Car-miles: Per cent loaded	Ton-miles (thousands): Gross. Excluding locomotives and tender	Ton-miles (thousands): Net. Revenue and non-revenue	Average number of locomotives on line daily: Serviceable	Unserviceable	Per cent unserviceable	Stored
New England Region:													
Boston & Albany	1924	394	253,180	268,939	27,604	5,037	67.8	253,808	94,290	113	33	22.5	...
	1923	394	342,443	369,099	39,604	6,748	68.4	363,072	155,905	123	26	17.4	...
Boston & Maine	1924	2,455	522,486	581,318	55,020	11,918	68.9	600,887	236,706	333	139	29.4	30
	1923	2,455	667,224	748,557	70,545	14,438	70.8	755,774	321,998	337	132	28.2	...
N. Y., New H. & Hartf.	1924	1,960	469,916	495,688	26,848	12,149	70.5	594,795	239,219	308	65	17.4	29
	1923	1,974	506,045	546,829	39,252	12,456	71.7	641,460	282,867	293	117	28.5	...
Great Lakes Region:													
Delaware & Hudson	1924	887	348,439	472,866	45,316	9,360	63.8	589,235	283,969	257	34	11.7	73
	1923	886	386,426	556,736	46,543	10,404	66.7	679,488	376,898	244	59	19.5	13
Del., Lack. & Western	1924	993	562,421	661,405	87,643	17,188	67.4	941,326	411,341	301	67	18.2	24
	1923	993	525,106	649,762	109,417	16,773	70.3	924,458	433,236	287	76	21.0	3
Erie (inc. Chic. & Erie)	1924	2,325	904,556	993,698	94,417	32,199	65.4	1,911,628	848,485	657	110	14.4	171
	1923	2,309	1,078,978	1,234,684	62,798	37,787	70.9	2,195,294	1,052,030	621	168	21.3	46
Lehigh Valley	1924	1,356	590,319	646,821	67,012	16,803	64.9	984,780	449,029	471	88	15.8	99
	1923	1,317	594,790	656,674	78,099	17,731	71.4	1,019,092	506,798	317	227	41.7	2
Michigan Central	1924	1,827	585,688	603,663	20,373	19,100	64.3	1,001,472	361,103	278	67	19.5	44
	1923	1,827	636,705	653,214	24,533	22,187	71.0	1,141,485	484,432	316	83	20.7	7
New York Central	1924	6,447	1,949,846	2,174,059	148,660	70,334	64.1	3,963,183	1,636,417	1,208	430	26.3	334
	1923	6,469	2,601,515	3,009,068	220,155	91,776	62.8	5,621,395	2,560,773	1,314	445	25.3	106
New York, Chic. & St. L.	1924	1,669	646,713	652,099	2,322	19,715	65.5	1,066,700	419,637	234	57	19.5	41
	1923	1,669	739,622	750,718	5,135	20,887	71.2	1,110,509	482,418	213	73	25.5	3
Pere Marquette	1924	2,227	359,922	371,773	8,724	9,226	66.8	510,153	233,519	188	24	11.4	25
	1923	2,182	423,040	452,972	9,668	11,843	74.3	625,470	318,423	163	45	21.5	...
Pitts. & Lake Erie	1924	231	110,464	116,780	1,075	3,843	61.8	280,269	159,562	64	21	24.9	14
	1923	231	203,519	211,864	980	6,756	59.6	514,114	292,967	67	17	20.5	...
Wabash	1924	2,459	639,190	659,163	8,982	19,231	69.7	1,016,700	412,605	300	56	15.8	19
	1923	2,418	617,320	656,398	7,108	19,212	75.6	979,888	425,392	243	78	24.4	7
Central Eastern Region:													
Baltimore & Ohio	1924	5,207	1,771,109	2,019,390	166,455	49,870	64.5	3,016,045	1,435,083	1,024	257	20.1	172
	1923	5,212	2,187,273	2,516,208	155,479	59,001	67.0	3,607,078	1,817,884	1,043	261	20.0	33
Central of New Jersey	1924	692	270,580	300,803	36,907	6,759	63.5	415,471	198,169	241	37	13.2	41
	1923	695	310,816	338,525	37,028	7,500	63.7	481,509	241,337	198	72	26.7	...
Chicago & Eastern Ill.	1924	945	209,184	210,436	3,626	5,469	64.9	317,958	149,575	114	46	28.5	31
	1923	945	243,970	248,584	4,854	6,471	65.3	383,963	189,496	115	54	32.2	7
Cleve., Cin., Chic. & St. L.	1924	2,379	628,605	661,062	12,234	19,476	63.6	1,186,612	553,373	342	86	20.1	47
	1923	2,377	696,349	739,413	6,251	23,017	66.4	1,377,315	684,222	312	113	26.6	6
Elgin, Joliet & Eastern	1924	460	117,742	127,495	5,705	3,574	65.3	267,217	138,863	83	15	15.4	...
	1923	460	156,128	177,211	12,704	4,995	68.2	369,368	201,551	86	14	13.5	...
Long Island	1924	393	49,725	53,550	10,247	632	56.7	38,851	14,694	42	12	22.2	...
	1923	393	48,522	59,437	10,224	629	57.7	37,876	14,815	41	9	18.2	...
Pennsylvania System	1924	10,900	4,157,072	4,467,633	302,052	114,292	66.1	7,134,401	3,354,428	2,707	720	21.0	404
	1923	10,876	5,049,689	5,610,562	457,712	139,980	65.9	9,203,641	4,651,968	2,579	750	22.5	...
Reading	1924	1,141	613,095	678,545	71,475	15,387	64.1	987,694	497,729	395	77	16.3	105
	1923	1,142	714,435	800,317	87,819	18,553	66.7	1,228,180	666,063	347	82	19.0	52
Pocahontas Region:													
Chesapeake & Ohio	1924	2,558	926,579	1,005,155	31,216	26,895	56.9	2,024,063	1,061,533	442	101	18.5	58
	1923	2,553	828,570	911,793	21,214	26,223	61.8	1,913,214	1,055,722	420	94	18.3	2
Norfolk & Western	1924	2,231	714,669	903,824	27,836	21,668	62.4	1,617,604	861,261	558	124	18.1	152
	1923	2,228	850,363	1,105,757	45,426	24,106	62.7	1,792,906	966,673	528	172	24.6	36
Southern Region:													
Atlantic Coast Line	1924	4,865	827,402	834,498	13,177	20,125	63.8	1,046,262	403,987	388	48	11.1	21
	1923	4,860	842,145	846,771	13,474	20,188	64.3	1,050,474	409,997	327	89	21.3	...
Central of Georgia	1924	1,907	305,453	307,573	5,369	6,625	72.4	343,490	155,186	135	20	12.8	10
	1923	1,907	311,250	315,636	4,770	6,420	77.5	336,560	166,819	114	17	13.1	...
I. C. (inc. Y. & M. V.)	1924	6,197	1,658,236	1,675,311	37,303	46,879	63.1	2,853,356	1,169,265	768	132	14.7	63
	1923	6,190	2,048,372	2,064,111	45,422	56,182	65.9	3,429,926	1,568,103	747	104	12.2	3
Louisville & Nashville	1924	5,026	1,616,919	1,713,625	64,615	29,498	63.7	1,867,260	895,155	578	110	15.9	33
	1923	5,024	1,685,787	1,803,170	63,785	30,799	63.9	1,952,420	946,947	594	119	16.7	1
Seaboard Air Line	1924	3,548	538,766	549,679	10,975	11,973	62.6	674,505	253,853	216	47	17.8	...
	1923	3,550	547,627	556,394	8,928	12,062	65.6	653,260	257,862	200	57	22.2	...
Southern Ry.	1924	6,820	1,456,130	1,495,565	34,122	33,455	67.2	1,812,874	735,228	861	105	10.9	9
	1923	6,942	1,627,230	1,678,992	39,851	35,655	67.5	1,940,700	851,255	882	168	16.0	1
Northwestern Region:													
Chic. & North Western	1924	8,463	1,389,042	1,431,577	22,637	31,362	64.4	1,725,309	696,599	838	237	22.0	105
	1923	8,463	1,642,277	1,704,298	28,591	36,707	65.7	2,028,864	849,614	865	228	20.9	...
Chic., Milw. & St. Paul	1924	10,983	1,370,978	1,414,821	60,765	37,396	67.1	2,023,680	882,977	951	171	15.3	108
	1923	11,007	1,873,438	1,936,989	72,499	46,289	61.7	2,711,949	1,204,132	847	203	19.3	15
Chic., St. P., Minn & Om.	1924	1,726	296,175	318,385	12,988	5,781	70.4	299,011	126,270	168	34	16.8	2
	1923	1,726	327,014	348,125	14,658	6,434	68.1	345,168	146,657	155	53	25.4	5
Great Northern	1924	8,252	700,445	725,242	36,991	22,202	70.8	1,211,162	572,863	605	171	22.1	151
	1923	8,255	869,278	905,008	49,592	24,930	68.1	1,403,980	657,055	532	233	30.4	26
M., St. P. & S. Ste. M.	1924	4,374	517,173	527,834	8,040	12,132	67.4	632,207	278,652	289	54	15.7	12
	1923	4,363	556,900	567,261	10,687	13,270	74.2	675,921	324,636	276	69	19.9	5
Northern Pacific	1924	6,415	732,386	764,973	43,208	22,779	72.9	1,222,387	563,748	552	159	22.3	99
	1923	6,415	804,213	840,096	50,904	24,302	71.1	1,324,351	619,278	532	192	26.5	24
Oreg.-Wash. R. R. & Nav.	1924	2,179	203,415	213,549	18,112	5,489	73.9	303,439	144,863	140	25	15.1	19
	1923	2,186	200,786	221,519	27,320	4,955	70.8	271,491	124,019	129	49	27.3	6
Central Western Region:													
Atch., Top. & S. Fe	1924	9,856	1,459,723	1,533,067	73,835	42,979	66.7	2,425,452	906,148	805	141	14.9	230
	1923	9,870	1,751,184	1,831,836	87,010	46,736	65.3	2,676,261	1,004,222	712	216	23.3	55
Chicago & Alton	1924	1,010	303,451	308,581	3,685	7,124	64.2	423,680	178,327	129	27	17.6	24
	1923	1,010	321,181	326,790	5,402	7,678	65.6	454,802	211,737	120	34	21.9	11
Chic., Burl. & Quincy	1924	9,334	1,371,940	1,416,570	56,212	38,573	65.2	2,200,916	980,064	803	218	21.4	75
	1923	9,326	1,725,116	1,800,606	87,354	48,170	64.9	2,873,597	1,355,629	767	209	21.4	2
Chic., Rock I. & Pacific	1924	7,635	1,284,343	1,303,728	13,984	30,070	66.7	1,618,782	652,015	527	245	31.8	35
	1923	7,635	1,425,503	1,459,666	18,153	30,860	67.2	1,692,637	723,589	494	194	28.2	7
Denver & R. G. Wn.	1924	2,599	205,553	251,242	43,460	4,916	70.9	291,010	146,280	255	70	21.5	87
	1923	2,593	223,291	283,385	55,104	4,980	72.4	281,664	139,637	231	112	32.7	15
Oregon Short Line	1924	2,364	293,545	306,497	21,775	7,844	71.5	455,408	217,450	199	25	11.1	63
	1923	2,367	343,483	361,087	24,309	7,984	63.0	486,128	210,527	168	70	29.6	21
Southern Pac. (Pac. Sys.)	1924	6,973	1,144,213	1,274,536	219,913	34,944	66.9	2,021,100	830,223	632	190	23.1	85
	1923	6,923	1,193,609	1,369,566	240,751	35,941	68.0	2,020,698	832,035	606	178	22.7	26
Union Pacific	1924	3,715	733,708	748,797	33,919	27,934	75.8	1,417,532	603,961	453	72	13.7	206
	1923	3,709	957,431	981,219	57,216	30,513	68.7	1,621,819	636,769	429	108	20.1	45
Southwestern Region:													
Gulf, Colo. & Santa Fe	1924	1,897	252,346	262,672	8,542	6,836	66.3	392,932	167,936	123	23	15.8	16
	1923	1,897	229,985	236,566	4,845	5,663	66.9	322,824	140,835	114	29	20.3	21
Missouri-Kansas-Texas	1924	1,801	226,569	226,689	4,787	7,631	62.0	435,328	173,567	141	50	26.2	69
	1923	1,871	270,924	271,504	9,133	7,761	62.8	438,977	179,004	108	77	41.7	12
Mo.-Kans.-Tex. of Tex.	1924	1,389	166,773	171,891	1,692	3,986	60.7	234,100	88,931	111	23	17.3	43
	1923	1,389	163,734	169,306	2,852	3,516	62.9	203,645	81,424	66	61	48.1	3
Missouri Pacific	1924	7,302	1,100,354	1,108,283	37,029	29,126	67.2	1,640,347	730,177	428	199	31.7	20
	1923	7,112	1,062,464	1,072,818	42,544	27,182	70.8	1,514,636	701,641	403	229	36.2	...
St. Louis-San Francisco	1924	4,683	818,389	827,349	14,374	16,747	65.5	953,510	401,544	422	75	15.1	41
	1923	4,683	933,175	951,085	15,955	17,326	65.2	991,283	431,181	374	125	25.1	...
Southern Pacific Lines (in Tex. and La.)[1]	1924	3,710	638,186	640,424	7,978	14,055	65.6	843,597	369,411	236	54	18.6	23
	1923	3,680	612,315	614,755	6,361	13,765	66.8	782,794	342,003	195	97	33.1	8
Texas & Pacific	1924	1,953	281,006	281,006	2,462	6,329	63.6	355,287	135,971	164	36	18.2	29
	1923	1,953	258,680	258,698	4,960	5,962	66.1	332,294	133,655	118	85	41.8	22

Compiled by Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

Compared with April, 1923, for Roads with Annual Operating Revenues above $25,000,000.

Region, road and year		Average number of freight cars on line daily					Gross tons per train, excluding locomotives and tender	Net tons per train	Net tons per loaded car	Net ton-miles per car-day	Car miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles including locomotives and tender	Locomotive miles per locomotive day
		Home	Foreign	Total	Per cent unserviceable	Stored								
New England Region:														
Boston & Albany	1924	2,270	5,284	7,554	4.6	....	1,002	372	18.7	416	32.8	7,979	202	67.8
	1923	1,451	9,600	11,051	2.8	....	1,060	455	23.1	470	29.7	13,192	202	91.6
Boston & Maine	1924	14,140	15,515	29,655	10.6	....	1,150	453	19.9	266	19.4	3,214	159	45.0
	1923	11,827	29,252	41,079	9.2	....	1,133	483	22.3	261	16.6	4,372	179	58.2
N. Y., New H. & Hart.	1924	20,046	17,045	37,091	19.5	....	1,266	509	19.7	215	15.5	4,068	152	46.8
	1923	16,417	36,433	52,850	13.5	....	1,268	559	22.7	178	11.0	4,776	195	47.7
Great Lakes Region:														
Delaware & Hudson	1924	10,422	6,620	17,042	4.9	136	1,691	815	30.3	555	28.7	10,666	194	59.4
	1923	7,934	10,503	18,437	7.6	....	1,758	975	36.2	681	28.2	14,174	219	66.2
Del., Lack. & Western	1924	16,082	8,908	24,990	3.4	110	1,674	731	23.9	549	34.0	13,814	177	67.8
	1923	11,542	14,108	25,650	3.9	....	1,761	825	25.8	563	31.0	14,542	207	69.7
Erie (inc. Chi. & Erie)	1924	34,439	18,815	53,254	6.3	10,286	2,113	938	26.4	531	30.8	12,166	132	47.3
	1923	21,099	36,879	57,978	8.7	....	2,035	975	27.8	605	30.6	15,185	147	54.8
Lehigh Valley	1924	22,642	9.415	32,057	6.5	781	1,663	761	26.7	467	26.9	11,039	168	42.6
	1923	18,678	18,627	37,305	5.2	....	1,713	852	28.6	453	22.2	12,828	189	45.0
Michigan Central	1924	13,477	15,023	28,500	5.5	1,333	1,710	617	18.9	422	34.8	6,590	125	60.2
	1923	7,959	25,212	33,171	6.6	....	1,793	761	21.8	487	31.4	8,840	129	56.8
New York Central	1924	64,539	73,096	137,635	5.0	23,526	2,033	839	23.3	396	26.6	8,461	131	47.3
	1923	54,864	110,838	165,702	9.2	....	2,161	984	27.9	515	29.4	13,196	130	61.2
New York, Chi. & St. L.	1924	10,581	11,173	21,754	5.6	....	1,649	649	21.3	643	46.1	8,383	128	75.1
	1923	3,487	17,813	21,300	7.4	....	1,501	652	23.1	755	45.9	9,637	150	88.0
Pere Marquette	1924	9,380	10,611	19,991	4.6	1,297	1,417	649	25.3	389	23.0	3,495	133	59.9
	1923	5,544	22,232	27,776	3.9	....	1,479	753	26.9	382	19.1	4,865	145	74.2
Pitts. & Lake Erie	1924	14,602	10,230	24,832	3.0	5,510	2,537	1,444	41.5	214	8.3	23,004	75	46.2
	1923	7,983	13,808	21,791	17.9	....	2,526	1,440	43.4	448	17.3	42,237	83	84.7
Wabash	1924	12,641	9,585	22,226	3.3	845	1,591	646	21.5	619	41.4	5,593	148	62.6
	1923	7,301	14,358	21,659	2.7	....	1,587	689	22.1	655	39.1	5,865	156	69.0
Central Eastern Region:														
Baltimore & Ohio	1924	70,088	35,756	105,844	8.3	11,684	1,703	810	28.8	452	24.3	9,187	179	56.9
	1923	46,551	52,962	99,513	8.1	....	1,649	831	30.8	609	29.5	11,626	191	68.3
Central of New Jersey	1924	17,307	10,683	27,990	5.0	3,322	1,535	732	29.3	236	12.7	9,546	190	40.5
	1923	11,969	17,563	29,532	7.6	....	1,549	776	32.2	272	13.3	11,582	203	46.5
Chicago & Eastern Ill.	1924	15,871	3,905	19,776	14.0	4,484	1,520	715	27.3	252	14.2	5.275	169	44.7
	1923	10,181	6,228	16,409	20.8	....	1,574	777	29.3	385	20.1	6,683	192	50.0
Cleve., Cin., Chi. & St. L.	1924	15,496	19,358	34,854	5.8	4,853	1,888	880	28.4	529	29.3	7,753	129	52.4
	1923	9,266	25,172	34,438	6.9	....	1,978	983	29.7	662	33.6	9,597	141	58.4
Elgin, Joliet & Eastern	1924	10,464	6,833	17,297	6.5	887	2,270	1,179	38.9	268	10.5	10,067	129	45.3
	1923	8,310	8,273	16,583	6.4	....	2,366	1,291	40.4	405	14.7	14,614	142	63.4
Long Island	1924	1,776	6,347	8,123	1.0	66	781	296	23.3	60	4.6	1,245	345	39.7
	1923	1,344	6,834	8,178	2.9	....	781	305	23.6	60	4.4	1,256	355	46.9
Pennsylvania System	1924	201,448	97,859	299,307	9.1	54,962	1.716	807	29.3	374	19.3	10,258	146	46.4
	1923	153,288	145,731	299,019	6.1	541	1,823	921	33.2	519	23.7	14,257	155	60.8
Reading	1924	22,145	16,197	38,342	3.2	5,802	1,611	812	32.3	433	20.9	14,535	190	53.0
	1923	14,461	24,352	38,813	4.2	....	1,719	932	35.9	572	23.9	19,439	186	69.0
Pocahontas Region:														
Chesapeake & Ohio	1924	29,777	11,723	41,500	4.5	7,329	2,184	1,146	39.5	853	38.0	13,833	126	63.7
	1923	27,453	16,755	44,208	10.3	....	2,309	1,274	40.3	796	32.0	13,785	134	60.6
Norfolk & Western	1924	28,125	9,499	37,624	3.6	2,116	2,263	1,205	39.7	763	30.7	12,869	170	45.6
	1923	25,179	13,536	38,715	5.2	....	2,108	1,137	40.1	832	33.1	14,464	199	54.8
Southern Region:														
Atlantic Coast Line	1924	20,921	14,280	35,201	4.6	....	1,265	488	20.1	383	29.9	2,768	132	64.8
	1923	13,952	18,361	32,313	9.3	....	1,247	487	20.3	423	32.4	2,812	137	69.1
Central of Georgia	1924	4,467	5,150	9,617	6.1	....	1,125	508	23.4	538	31.7	2,713	161	67.3
	1923	1,806	6,654	8,460	5.8	....	1,081	536	26.0	657	32.6	2,916	186	81.5
I. C. (inc. Y. & M. V.)	1924	45,334	21,737	67,071	4.8	3,067	1,721	705	24.9	581	36.9	6,289	138	63.5
	1923	26,845	40,535	67,380	6.5	138	1,674	766	27.9	776	42.2	8,444	153	82.6
Louisville & Nashville	1924	43,188	20,191	63,379	6.4	112	1,155	554	30.3	471	24.3	5,937	172	86.3
	1923	23,953	25,273	49,226	12.1	53	1,158	562	30.7	641	32.6	6,283	177	87.2
Seaboard Air Line	1924	9,369	10,022	19,391	6.1	....	1,252	471	21.2	436	32.9	2,385	148	71.2
	1923	9,351	13,258	22,609	21.3	....	1,193	471	21.4	380	27.1	2,421	165	73.3
Southern Ry	1924	37,121	26,474	63,595	4.9	....	1,245	505	22.0	385	26.1	3,593	182	52.8
	1923	25,447	38,845	64,292	8.7	....	1,193	523	23.9	441	27.4	4,087	204	54.6
Northwestern Region:														
Chi. & North Western	1924	46,535	26,376	72,911	8.2	....	1,242	501	22.2	318	22.3	2,744	160	45.1
	1923	34,334	44,515	78,849	6.6	....	1,235	517	23.1	359	23.6	3,347	181	52.8
Chi., Milw. & St. P.	1924	52,292	23,609	75,901	6.6	....	1,476	644	23.6	388	24.5	2,680	165	43.8
	1923	36,861	44,085	80,946	8.2	....	1.448	643	26.0	496	30.9	3,646	167	63.8
Chi., St. P., Minn. & Om.	1924	3,481	9,402	12,883	8.2	1,121	1,010	426	21.8	327	21.2	2,438	162	54.7
	1923	2,683	10,086	12,769	9.7	34	1,056	448	22.8	383	24.7	2,832	188	58.0
Great Northern	1924	44,942	7,415	52,357	6.0	....	1,729	818	25.8	365	20.0	2,314	149	32.7
	1923	36,282	12,850	49,132	8.5	....	1,615	756	26.4	446	24.8	2,653	165	41.6
M., St. P., & S. Ste. M.	1924	17,843	6,772	24,615	4.1	1,378	1,222	539	23.0	377	24.4	2,124	125	52.1
	1923	13,976	10,601	24,577	12.7	228	1,214	583	24.5	440	24.3	2,480	128	56.0
Northern Pacific	1924	32,644	9.231	41,875	7.4	434	1,669	770	24.7	449	24.9	2,929	128	37.9
	1923	24,832	10,778	35,610	11.6	....	1,647	770	25.5	580	32.0	3,218	137	41.0
Oreg.-Wash. R. R. & Nav.	1924	4,855	4,521	9,376	4.5	....	1,492	712	26.4	515	26.4	2,216	185	46.7
	1923	5,719	3,891	9,610	5.1	....	1,352	618	25.0	430	24.3	1,891	213	46.8
Central Western Region:														
Atch., Top. & S. Fe	1924	54,249	14,694	68,943	7.4	13,985	1,662	621	21.1	438	31.1	3,065	136	56.7
	1923	40,588	21,743	62,331	7.5	5,868	1,528	573	21.5	537	38.3	3,391	154	68.9
Chicago & Alton	1924	9,883	5,721	15,604	3.0	3,500	1,396	588	25.0	381	23.7	5,884	157	66.7
	1923	5,992	7,289	13,281	7.6	....	1,416	659	27.6	531	29.4	6,986	189	72.3
Chi., Burl. & Quincy	1924	50,666	19,583	70,249	6.5	230	1,604	714	25.4	465	28.1	3,500	162	48.1
	1923	36,539	32,103	68,642	8.9	....	1,666	786	28.1	658	36.1	4,845	171	64.5
Chi., Rock I. & Pacific	1924	33,863	18,118	51,981	10.9	8,022	1,260	508	21.7	418	28.9	2,847	167	56.8
	1923	21,955	22,045	44.000	11.9	185	1,187	508	23.4	548	34.8	3,159	189	71.6
Denver & R. G. Wn.	1924	12,606	3,089	15,695	6.6	5,409	1,416	712	29.8	311	14.7	1,876	208	30.2
	1923	11,006	3,292	14,298	8.4	1,085	1,261	625	28.0	326	16.0	1,795	239	32.9
Oregon Short Line	1924	7,212	4,345	11,557	5.1	....	1,551	741	27.7	627	31.6	3,067	141	49.0
	1923	5,111	4,627	9,738	7.0	....	1,415	613	26.4	721	43.4	2,965	156	54.0
Southern P. (P. System)	1924	23,246	26,844	50.090	5.7	7,796	1,766	726	23.8	552	34.5	3,969	135	60.6
	1923	18,162	23,521	41,683	4.7	694	1,693	697	23.2	665	42.1	4,006	147	68.5
Union Pacific	1924	19,061	7,895	26.956	11.7	....	1,932	823	21.6	747	45.6	5,419	142	49.7
	1923	12,485	10,522	23,007	12.4	....	1,694	665	20.9	923	64.4	5,723	159	64.4
Southwestern Region:														
Gulf, Colo. & S. Fe	1924	7,275	4,196	11,471	3.5	725	1,557	665	24.6	488	30.0	2,951	118	62.0
	1923	5,233	4,447	9,680	5.2	372	1,404	612	24.9	785	29.2	2,475	143	56.5
Mo.-Kans.-Tex.	1924	9,970	5,410	15,380	4.8	2,141	1,921	766	22.7	376	26.7	3,212	112	40.4
	1923	8,669	7,460	16,129	8.8	....	1,620	661	23.1	370	25.5	3,190	140	50.6
Mo.-Kans.-Tex. of Tex.	1924	258	9,250	9,508	10.6	3,673	1,404	533	22.3	312	23.0	2,134	126	43.1
	1923	246	8,333	8,579	15.3	....	1,244	497	23.2	316	21.7	1,954	154	45.1
Missouri Pacific	1924	27,690	18,913	46,603	9.2	....	1,491	664	25.1	522	31.0	3,333	143	60.9
	1923	20,208	30,227	50,435	9.2	....	1,426	660	25.8	464	25.4	3,289	172	58.9
St. Louis-San Francisco	1924	19,676	11,710	31,386	5.3	....	1,165	491	24.0	426	27.2	2,858	168	56.4
	1923	14,496	19,011	33,507	8.2	....	1,062	462	24.9	429	26.4	3,069	203	64.6
Southern Pacific Lines (in Tex. and La.)[1]	1924	7,878	13,787	21,665	6.1	2,421	1,322	579	26.3	568	33.0	3,319	120	74.5
	1923	5.865	13,535	19,400	4.9	300	1,278	559	24.8	588	35.4	3,098	126	71.0
Texas & Pacific	1924	5,672	5,436	11,108	8.5	....	1,264	484	21.5	408	29.9	2,321	147	47.3
	1923	3,497	7,145	10,642	14.8	....	1,285	517	22.4	419	28.2	2,281	146	43.4

[1] Includes Galveston, Harrisburg & San Antonio, Houston & Shreveport, Houston & Texas Central, Houston, East & West Texas, Iberia & Vermilion, Lake Charles & Northern, Louisiana Western, Morgan's La. & Tex. R. R. & S. S. Co., and Texas & New Orleans.

Commission and Court News

Interstate Commerce Commission

Proposed Readjustment of Eastern Class Rates

The Interstate Commerce Commission has issued an order denying, effective November 15, portions of the fourth section applications by which carriers parties to said applications asked for authority to continue to maintain class freight rates:

(1) Between points within eastern trunk line territory which are lower for longer than for shorter distances over the same route in the same direction, the shorter being included within the longer distance;

(2) From or to points in eastern trunk line territory to or from points in adjacent territory that are lower than rates on like property from, to or between intermediate points in eastern trunk line territory;

(3) From, to or between points in eastern trunk line territory that are higher than rates from, to or between points in adjacent territory, when such points in eastern trunk line territory are directly intermediate to points in adjacent territory;

also for authority to continue to maintain class rates for the transportation of traffic via rail, or partly via rail and partly via water, which are lower for longer than for shorter distances over the same line or route in the same direction;

(1) Between points in central freight association territory on the one hand and points in eastern trunk line territory and New England freight association territory on the other;

(2) Between points in eastern trunk line territory on the one hand, and points in New England freight association territory on the other.

At the hearing on these applications no evidence was introduced in justification of the fourth section departures involved. The carriers stated that they were not prepared to justify such departures and agreed that a general denial order should be entered. They further stated that the removal of such departures would involve a general readjustment of the class freight rates within eastern trunk line territory; also certain readjustments in the class rates between central territory on the one hand and eastern trunk line and New England territories on the other, and between eastern trunk line and New England territories. The carriers requested that the effective date of the denial order be made far enough in the future to enable them to complete the proposed readjustment.

All fourth section relief heretofore authorized by the commission with respect to these rates, whether of a temporary or permanent character, will also be rescinded, effective on the same date.

Court News

Not Liable for Injury While Train is Operated by Another Company

The Delaware & Hudson, which owns the stock of the Napierville Junction Railroad Company, a Quebec corporation, has a contract with the subsidiary company that certain through trains of the D. & H., manned by its men, are to be handled by the Napierville on its link of the through movement between New York and Montreal, for the Napierville's own purposes and under its own absolute direction and control. In a grade crossing case against the D. & H. where an automobilist was killed by collision with a D. & H. train, being operated over the Napierville tracks by an engineer in the general employ of the D. & H., the action was based on the negligence of the engineer in failing to give warning of the train. The chief question was which railroad was operating the train. The D. & H. paid the engineer and crew, but in the periodical financial adjustments between the two companies reimbursements by the Napierville to the D. & H. entered. The Circuit Court of Appeals, Third Circuit, holds that the D. & H. was not operating the train and therefore was not liable for the injury. The power to discharge the crew did not determine the character of the control of the operation of the train.—Delaware & Hudson v. Van Derpool, 292 Fed. 688.

United States Supreme Court

Express Companies Not "Carriers by Railroad"

The Supreme Court of the United States has reversed the decree of the federal district court for Northern Georgia which temporarily enjoined the enforcement of the order of the Interstate Commerce Commission for the establishment of through routes prayed for by the Southeastern Express Company, the Commission having found that it was necessary and desirable in the public interest that competitive joint routes be established, although the American Railway Express had reasonable routes from origin to destination, or from origin to a point nearer destination than the joint through routes established. Southeastern Express Co. v. American Express Co., 78 I. C. C. 126; 81 I. C. C. 247. Three appeals came before the Supreme Court. The main question was whether the American, itself was a "carrier by railroad," within the meaning of section 15 of the Transportation Act, 1920. Paragraph 3 of that section, directs that the Interstate Commerce Commission "whenever necessary or desirable * * * establish through routes;" and the Commission shall not require any carrier by railroad, without its consent, to embrace in such route substantially less than the entire length of its railroad which lies between the termini of such proposed through route, unless such inclusion would make the through route unreasonably long * * *. That is, the Commission shall not compel the carrier to short haul its traffic.

Holding that an express company is not a carrier by railroad the Supreme Court says: "The power to establish through routes is conferred broadly as to all carriers by paragraph 3 of section 15. The limitation upon the power in respect to a 'carrier by railroad' is imposed by paragraph 4. The language which embodies this limitation is not appropriate to describe the situation of an express company. An express company has no railroad. It is served by many railroads, by water, by motor trucks and by horses and wagons. Moreover, the language of paragraph 4 describes aptly a single railroad system, but not a system of express routes extending over many separate railroad systems. If an express company is a 'carrier by railroad,' the 'entire length of its railroad' must, as the American argues, be construed to mean the entire length of all the lines of the railroads within the United States over which it has routes. Such a construction would, if adopted, tend to give permanency to an existing monopoly although it failed to give adequate service. For it would deprive the commission of power to foster the competition found necessary to secure such service."

The American Express also contended that the order exceeded the power conferred upon the commission, first, because it is unreasonable to establish a second through route merely for the sake of securing competition in service, and, second, because it purported to authorize the shipper to give routing instructions. It claimed that it has the right to carry, over its own lines, traffic which it originated, as long as this can be done without unreasonably delaying the delivery at destination, which right is property protected by the Fifth Amendment; that to authorize the shipper to give routing instructions takes this property; and that the provision for making an equitable division of the joint rate does not afford the legal compensation for the taking to which it is entitled.

As to these contentions the Supreme Court says that the competitive route ordered must, of course, be reasonable in character from the standpoint of transportation; and there must be reasonable cause for establishing it. The commission had found that "in considering competition time is not the only important element. Competition tends to make each company improve its general treatment of the public, its practices, rules and regulations in regard to its methods of doing business." It found also, that the "service at common points has improved since the formation of the Southeastern." The Supreme Court holds that the commission's conclusion that the establishment of the competitive routes was necessary and desirable in the public interest, was not shown to have been unreasonable.

The existence of a competitive route ordinarily implies an option to the shipper. To give him the privilege of directing the routing is a corollary of the establishment of competitive routes. The commission's order that the shipper by express may direct the routing is held not unreasonable and not violative of any of the American's constitutional rights.—United States v. American Ry. Express Co. Opinion by Justice Brandeis. Decided June 2, 1924.

Labor News

The Chesapeake & Ohio has made a general advance in pay of conductors, brakemen and switchmen. The increase is to take effect from May 1, 1924, and is said to amount to from 30 cents to 36 cents a day.

Clerical employees on the New York, New Haven & Hartford have joined their fellow workers on the New York Central, the Pennsylvania and other eastern lines in requests for general wage increases. Negotiations on a number of lines are understood to be under way.

Wage Increase for Telegraphers

The Railroad Labor Board has ordered an increase in wages of five cents an hour to telegraphers employed by the Terminal Railroad Association of St. Louis, who are members of the Order of Railroad Telegraphers. The labor board assumed jurisdiction of the dispute when the employees, who asked an increase of 7.76 cents an hour, had refused the offer of the company of an increase of two cents an hour.

B. L. E. Election

Warren S. Stone, grand chief engineer of the Brotherhood of Locomotive Engineers, was elected president in charge of all brotherhood activities, including the labor organization, banking and insurance, at the tri-ennial convention of the brotherhood in Cleveland, O., on June 16. Mr. Stone's new position was established as a result of a re-organization plan made necessary by the great extension of the brotherhood's activities. Under the new arrangement, two vice-presidents, a secretary, and a grand chief engineer will head departments under Mr. Stone's supervision.

A. C. L. Drawbridge Tenders

In ruling on the dispute between the Atlantic Coast Line and the Order of Railroad Telegraphers relative to the proper classification and rate of pay for employees located at the Ashley river drawbridge at Drayton Hall, S. C., the Railroad Labor Board has declared that these employees should be properly classified as levermen and paid accordingly. The employees based their contention on the fact that the bridge tenders operate levers from a tower, controlling switches, signals and derails which govern the movement of trains, and held that they should therefore be classified as levermen. The management of the road contended that the employees involved are not required to handle train orders, that they do not report to the train dispatcher and that there is no direct means of communicating with them either by telephone or telegraph. They therefore should be classified as drawbridge operators, the management held. The Labor Board, however, overruled this opinion.—Decision No. 2425.

Commissions for Handling Milk Shipments

The Railroad Labor Board has remanded to the parties in the dispute, with the opinion that the employees are entitled to an adjustment in compensation, the controversy between the Minneapolis, St. Paul & Sault Ste. Marie and the Order of Railroad Telegraphers relative to the request of the employees that agents be allowed a commission of 10 per cent for handling shipments of milk and cream. Prior to April 1, 1921, such shipments had been transported by express but after that time they were taken over by the railroad and no additional compensation was allowed the agents, although they had received a commission of 10 per cent from the express company. The board decided that the payment of commission on express shipments of milk and cream was a part of the agents' compensation and that when the practice of handling the shipments by express was discontinued the employees were entitled to increased compensation. The board did not fix new rates, however, but remanded the dispute for further

Labor Board Decisions

Monthly Guarantee to Trainmen

The Railroad Labor Board has issued a decision that "regularly assigned passenger conductors and trainmen who do not run a sufficient number of days to absorb the monthly guarantee, may not be used on lay-over days in extra or additional service to apply on the monthly guarantee of runs, where the monthly mileage of the run is less than the mileage obtained by dividing the monthly guarantee by the mileage rates of supplement 25 to general order No. 27." This decision was handled down in a dispute between the Southern Pacific, the Order of Railway Conductors and the Brotherhood of Railroad Trainmen on the question of a proper interpretation of the decision of the Railway Board of Adjustment No. 1, in Case No. 27-299.—Decision No. 2437.

Representation of Telegraphers on Clover Leaf

Negotiations between the New York, Chicago & St. Louis and its telegraphers on the Clover Leaf district, who are represented by the Order of Railroad Telegraphers, shall be carried on between the management and the system representatives of the brotherhood, instead of the district representatives, according to a decision of the Railroad Labor Board. When the Toledo, St. Louis & Western was consolidated with the New York, Chicago & St. Louis, certain questions were in dispute between the former railway and its telegraphers. After the consolidation took place, the Order of Railroad Telegraphers transferred its membership on the Clover Leaf district to the consolidated system and the former general chairman of the N. Y. C. & St. L. road became the system general chairman. In the settlement of the disputed questions affecting the Clover Leaf district, the management of the New York, Chicago & St. Louis agreed to confer with the district representatives of the Clover Leaf district provided system representatives were excluded from such negotiations. The employees refused to agree to this and their position was upheld by the labor board in its decision.—Decision No. 2452.

George Munro, Pioneer Track Layer of the Canadian Pacific, Received Birthday Greetings on May 21 from President E. W. Beatty

Equipment and Supplies

Freight Cars

The Great Northern is inquiring for 100 underframes for automobile cars.

The Chicago, Rock Island & Pacific is inquiring for repairs to 146 dump cars.

The War Department is inquiring for 2, 12-bench open body narrow gage motor cars and 6 narrow gage motor gondola cars.

The Carnegie Steel Company has ordered 9, 70-ton and 21, 50-ton hopper car bodies from the Warren Steel Car Company, Warren, Pa.

Iron and Steel

The Atchison, Topeka & Santa Fe is inquiring for 3,000 tons of structural steel.

The Delaware, Lackawanna & Western is inquiring for 300 tons of structural steel.

The Southern is inquiring for 5,000 tons of structural steel for a bridge at Burnside, Ky.

The Michigan Central is inquiring for 850 tons of structural steel for use at Detroit, Mich.

The Cleveland, Cincinnati, Chicago & St. Louis is inquiring for 600 tons of structural steel.

The Missouri Pacific has ordered 226 tons of deck plate girder spans for use in St. Louis, Mo., from the American Bridge Company.

Locomotive Shipments in May

The Department of Commerce announces May shipments of railroad locomotives, from the principal manufacturing plants, based on reports received from the individual establishments.

The following table gives the shipments of locomotives in May and unfilled orders as of May 1, with comparisons for earlier months:

Year and Month	Locomotives Shipments			Unfilled Orders		
1923	Total	Domestic	Foreign	Total	Domestic	Foreign
January	299	217	12	1,788	1,699	89
February	207	196	11	2,220	2,141	79
March	282	269	13	2,316	2,214	102
April	217	201	16	2,204	2,111	93
May	238	228	10	2,150	2,045	105
June	232	221	11	1,958	1,854	104
July	239	211	28	1,738	1,652	86
August	272	259	13	1,497	1,406	91
September	335	313	22	1,178	1,102	76
October	310	295	15	977	915	62
November	299	270	29	691	656	35
December	329	305	24	387	365	22
1924						
January	151	147	4	376	344	32
February	99	92	7	499	466	33
March	132	128	4	534	494	40
April	73	63	10	640	586	54
May	111	93	18	643	589	54

American Contract in Japan

A press dispatch from Shanghai, China, on June 7 reports that the Asia Development Company, described as an American corporation, has contracted with the government of Japan to construct a harbor at Hakata, a work which will include a railroad of considerable length to reach large coal fields. Hakata is on the Island of Kyusha near Moji.

The Canadian National Express handles 12,000,000 shipments a year through 4,000 offices. Collection is made by 1,200 trucks, wagons or sleighs. The work engages the services of 3,500 employees at a cost of approximately $4,500,000. In the 12 months of the last calendar year 3,514 live foxes in crates were shipped by fox breeders in Prince Edward Island, New Brunswick and Nova Scotia.

Supply Trade News

The Hall Switch & Signal Company has moved its Chicago office to 1641 Straus Building, 310 South Michigan avenue.

The Union Metal Products Company, Chicago, builders of car ends and car roofs, has acquired the plant of the **Keith Railway Equipment Company,** Hammond, Ind.

Morgan P. Ellis, for the past eight years assistant general rates manager of the **Economy Fuse & Manufacturing Company,** Chicago, has been appointed general sales manager.

The Chicago Great Western has awarded a contract to the **Conveyors' Corporation of America** for the installation of a steam jet cinder conveyor in its power plant at Oelwein, Iowa.

E. H. Batchelder, Jr., suite 901, Lytton building, 14 East Jackson boulevard, Chicago, has been appointed western sales representative of the **Standard Railway Fusee Corporation,** Boonton, N. J.

The Industrial Works, Bay City, Mich., announce the appointment of **Ridenour, Seaver & Kendig,** 773 Ellicott Square, Buffalo, N. Y., **L. N. Ridenour,** resident manager, as representatives in the Buffalo district.

K. E. Kellenberger, signaling department editor of the *Railway Age* and editor of Railway Signaling, has been appointed eastern manager of the **National Safety Appliance Company,** with headquarters at 608 Railway Exchange building, Chicago.

The Cleveland, Cincinnati, Chicago & St. Louis has awarded a contract to the **Conveyors' Corporation of America** for the installation of a steam jet cinder conveyor in its boiler plant at Indianapolis, Ind., for the discharge of cinders from the ash pits to a 25-ton overhead bunker.

The Gisholt Machine Company, Madison, Wis., has purchased the business of the **Milholland Machine Company,** Indianapolis, Ind., including the stock of finished machines, parts in process, good will, trade mark, patents, drawings, jigs, tools and fixtures and will continue the manufacture and sale of Milholland machines at Madison.

Frederick Maples, who for a number of years was power director of the Long Island and who was until recently connected with Hubbard & Co., Pittsburgh, pole line construction materials manufacturers, has become associated with the **Truscon Steel Company,** Youngstown, Ohio, as manager of the newly instituted steel pole department.

H. A. Sparrow has joined the **Robert June Engineering Management & Industrial Advertising Organization** of 8938 Linwood avenue, Detroit, Mich. Mr. Sparrow is a graduate of Rensselaer Polytechnic Institute, with the degree of M. E. He has served in the capacity of assistant sales and advertising manager of the London Steam Turbine Company, Troy, N. Y., and later as plant engineer with the New York Telephone Company of Brooklyn.

J. H. Slawson, formerly vice-president and general manager of the Joliet Railway Supply Company, Chicago, has been appointed manager of the newly created brake beam department of the **Chicago Malleable Casting Company,** with headquarters at 435 Railway Exchange building, Chicago. **C. A. Benz,** formerly assistant general manager of the Joliet Railway Supply Company, has been appointed assistant manager of the brake beam department. The new department has been created for the manufacture of A. R. A. No. 2 and 2-plus brake beams and other railway devices.

J. C. Merwin, works manager of the **Chain Belt Company,** Milwaukee, Wis., has been elected second vice-president, with headquarters at Milwaukee; **Brinton Welser,** assistant secretary, has been promoted to secretary, and **C. E. Stone,** assistant to the president and purchasing agent, has been promoted to assistant secretary. **C. R. Messinger,** president, **Clifford F. Messinger,** first vice-president and **C. L. Pfeifer,** treasurer,

were re-elected. Mr. Merwin, who graduated from Sheffield Scientific School, Yale University, in 1910, has been associated with the company since 1917. Mr. Welser graduated from the University of Wisconsin in 1912 and has been with the Chain Belt Company in various capacities ever since. Mr. Stone graduated from the University of Michigan in 1910 and has been purchasing agent of the company since 1918.

Correction

The announcement in the *Railway Age* of June 7 to the effect that the **Continental Railway Supply Company,** Peoples Gas building, Chicago, has been organized by O. E. Quinton, secretary and treasurer of the Burry Railway Supply Company, Chicago, and V. J. Burry, president of the Burry Railway Supply Company, to sell railway truck and car specialties, including roller bearings, center plates, springs, contact shoes and bus heating equipment, is incorrect in that Mr. Burry is not one of the organizers.

What the Census Tells of the Locomotive Industry

The Department of Commerce announces that, according to reports for the Census of Manufactures, 1923, the establishments engaged primarily in the manufacture of locomotives in that year produced 3,422 steam locomotives, valued at $177,891,022, together with other products, including repair work, valued at $37,501,929, making a total of $215,392,951. The rates of increase in number and value of locomotives manufactured, as compared with 1921, the last preceding census year, were 103.7 per cent and 132.4 per cent, respectively, while the total value of products of the industry increased by 111.1 per cent. High rates of increase also appear for number of employees, amount paid in salaries and wages, and cost of materials used.

It is natural that a rapid growth should be shown in comparison with 1921, which was a year of industrial depression. Nevertheless, when comparison is made with the abnormally active year 1919, during which production in this industry exceeded that reported for any preceding census year, a substantial gain—37.8 per cent in total value of products—is recorded for 1923.

The figures given above do not include the number and value of locomotives manufactured by establishments (principally steam-railroad repair shops) engaged primarily in other industries. These data have not yet been compiled, but will be included in a subsequent report. Establishments engaged primarily in other industries in 1921 manufactured 77 steam locomotives valued at $3,125,429, or only three per cent of the total value of products reported for the locomotive industry.

The decrease in the number of establishments from 22 to 19 was due to the fact that 3 comparatively small establishments made no locomotives in 1923 and were therefore assigned to other industry classifications. Of the 19 establishments reporting for 1923, 7 are located in Pennsylvania, 3 in Ohio, 2 each in Georgia, New York, and Virginia, and 1 each in Illinois, Iowa, and New Jersey.

The statistics for 1923 and 1921 are summarized in the following statement. The figures for 1923 are preliminary and subject to such correction as may be found necessary upon further examination of the returns.

		1923		1921	Per cent of increase *a*
Number of establishments		19		22	.....
Persons engaged		33,608		18,328	83.4
Proprietors and firm members		......		1	.....
Salaried employees		2,936		1,744	68.3
Wage earners (average number)		30,672		16,583	85.0
Number, 15th day of month—					
Maximum month and number	Aug.	33,863	Jan.	28,990	.....
Minimum month and number	Dec.	25,335	Nov.	12,509	.....
Per cent of maximum		74.8		43.1	.....
Salaries and wages		$58,654,091		$24,576,450	138.7
Salaries		6,787,115		4,103,735	65.4
Wages		51,866,976		20,472,715	153.3
Primary horsepower		91,884		*b*	.....
Cost of materials (including fuel)		$124,261,528		$55,411,656	124.3
Coal consumed, tons of 2,000 lbs.		431,115		*b*	.....
Products, total value		$215,392,951		$102,023,358	111.1
Locomotives, steam—					
Number		3,422		1,680	103.7
Value		$177,891,022		$76,551,345	132.4
All other products, including repair work, value		37,501,929		25,472,013	47.2
Value added by manufacture *c*		91,131,423		46,611,702	95.5

a Per cent not computed where base is less than 50.
b Not reported.
c Value of products less cost of materials.

Railway Construction

Atchison, Topeka & Santa Fe.—This company contemplates the construction of an under pass to eliminate the grade crossing at the intersection of its tracks and Second avenue in Dallas, Tex.

Atchison, Topeka & Santa Fe.—This company has awarded a contract to George P. Nichols & Bro., Chicago, for the construction of a 120 ft. transfer table of 427 tons' capacity, at San Bernardino, Cal.

Los Angeles County.—The county officials have applied for permission to construct a railroad approximately 10 miles long from Azusa, Cal., to the San Gabriel canyon. The line is to be used for the transportation of materials for a dam in the canyon.

Pennsylvania.—This company has awarded a contract to the James McGraw Company, Philadelphia, Pa., for the construction of three over-head bridges at Renovo, Pa., Irvineton and Youngsville, respectively, at an approximate cost of $190,000. These bridges are being constructed in connection with the elimination of grade crossings.

Reading.—This company has awarded contracts to O'Rourke Bros., Norristown, Pa., for the substructure and to the Johns-Manville Incorporated, Philadelphia, Pa., for the waterproofing for a bridge on the line of State Highway No. 149, west of Wyomissing, Pa., on its Lebanon Valley branch.

Reading.—This company has awarded contracts to the Folwell-Ahlskog Company, Chicago, for the substructure; to the American Bridge Company, Philadelphia, Pa., for the superstructure and to the Minwax Company, Inc., New York, for the waterproofing required for the reconstruction of a bridge over the Schuylkill River, north of Birdsboro, Pa.

Southern Pacific.—This company will soon begin the construction of a 9-mile belt line at Dallas, Tex.

Southern Pacific.—This company has announced that if plans for the consolidation of the Southern Pacific and the El Paso & Southwestern are approved, a main line will be built through the city of Phoenix, Ariz., extending from Red Rock, Ariz., to a connection with the Phoenix & Eastern at Magma Junction or Florence, and from Hassayampa to a connection with the main line of the Southern Pacific at some point between Colfred, Ariz., and Indio, Cal. The lines of the Phoenix & Eastern and the Arizona Eastern are to be reconstructed to conform to main line standards. This construction is to be completed within two years after the consolidation with the El Paso & Southwestern is completed. The total amount of new construction will be between 110 and 150 miles of line.

Temiskaming & Northern Ontario.—This company has awarded a contract to Stuart & Sinclair, Hamilton, Ont., for the construction of an enginehouse at North Bay, Ont., estimated to cost $75,000.

Terminal Railroad Association of St. Louis.—This company is constructing with company forces a two-story service building, 49 ft. by 81 ft., in St. Louis, Mo. The building will be of brick and concrete construction and will cost approximately $30,000.

Yosemite Valley.—This company is calling for bids for the relocation of its line from Merced Falls, Cal., to Detwiler, a distance of 17 miles. The project is estimated to cost $5,000,000.

The Fisheries of the Province of Manitoba furnished last winter for the Canadian National Express Company shipments of fresh fish amounting to about 2,400 tons. This industry was started only about three years ago. The fish are caught by settlers living along the shores of Lake Manitoba with nets lowered through holes cut in the ice. The fish is placed on the New York market as Manitoba fresh-caught unfrozen whitefish, and as such commands a premium of three to four cents a pound over the frozen article.

Railway Financial News

BALTIMORE & OHIO.—*Bonds.*—The Interstate Commerce Commission has authorized an issue of $35,000,000 refunding and general mortgage 6 per cent bonds, to be sold at not less than 96½; also the pledge with the trustees of the refunding and general mortgage of $7,712,300 of Toledo-Cincinnati division first lien and refunding mortgage bonds, and the pledge with trustees of certain mortgages of $5,000,000 Schuylkill River East Side first mortgage bonds.

BESSEMER & LAKE ERIE.—*Annual Report.*—The annual report of this company and leased lines for the year ended December 31, 1923, shows a net income before dividends of $6,146,304 as compared with $3,942,778 in 1922. The consolidated comparative income account follows in brief:

	1923	1922	Increase or decrease
Railway operating revenues	$20,367,252	$14,511,803	$5,855,448
Railway operating expenses	13,917,892	10,079,595	3,838,297
Net revenue from railway operations	6,449,360	4,432,208	2,017,151
Railway tax accruals	996,989	562,077	434,912
Railway operating income	5,452,178	3,870,269	1,581,909
Total non-operating income	1,756,879	1,201,295	555,584
Gross income	7,209,057	5,071,563	2,137,493
Total deductions from gross income	1,062,753	1,128,786	—66,033
Net income	6,146,304	3,942,777	2,203,527
Dividend appropriations of income	419,966	419,966	....
Income balance transferred to Profit and Loss	5,726,338	3,522,812	2,203,526

CANADIAN NATIONAL.—*Directorate.*—John H. Sinclair, former member of Parliament and a director of the Canadian National Railways, died at New Glasgow, N. S., on June 8.

CAROLINA, CLINCHFIELD & OHIO.—*Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority for an issue of $1,000,000 of 5 per cent equipment trust certificates which have been sold to Blair & Co., at 96.

Lease Approved.—The Interstate Commerce Commission has authorized, subject to certain conditions, the acquisition by the Atlantic Coast Line and the Louisville & Nashville of joint control of the C. C. & O., by lease. See article on another page of this issue.

CENTRAL OF GEORGIA.—*New Director.*—William D. Anderson, of Macon, Ga., has been elected a director in place of John E. Murphy, deceased.

CHICAGO & NORTH WESTERN.—*Bonds.*—The Interstate Commerce Commission has authorized the issue and sale of $3,150,000 of general mortgage bonds of 1987.

CHICAGO, INDIANAPOLIS & LOUISVILLE.—*Dividend Rate Increased.*—The directors have declared a dividend of 2 per cent on the common stock and the regular semi-annual dividend of 2 per cent on the preferred stock, both payable July 10 to stock of record June 28. Heretofore dividends on the common had been at the rate of 1⅝ per cent semi-annually.

CLEVELAND & PITTSBURGH.—*Stock.*—The Interstate Commerce Commission has authorized this company to issue $9,928,850 of special guaranteed betterment stock, to be guaranteed by the Pennsylvania as lessee, and to be delivered to it in payment of additions and betterments made by the lessee company from 1918 to 1922.

COLORADO & SOUTHERN.—*Annual Report.*—This company's annual report for the year ended December 31, 1923, is reviewed in an article on another page of this issue entitled "Colorado & Southern Handicapped by Floods." See also excerpts from annual report on adjacent page.

DENVER & RIO GRANDE WESTERN.—*Plan Operative.*—Kuhn, Loeb & Co. and the Equitable Trust Company of New York, reorganization managers, under the plan and agreement dated June 15, 1923, as modified February 29, 1924, have declared the plan operative.

The Interstate Commerce Commission has authorized the issue of securities contemplated under the modified plan and has also approved the acquisition by the Missouri Pacific of one-half the common stock of the Denver & Rio Grande Western.

Holders of more than 79 per cent of the refunding bonds and of more than 95 per cent of the adjustment bonds have already assented to the modified plan, and reorganization managers have given notice that they have extended the time for the deposit of bonds to the close of business July 19, 1924, after which date no deposits will be received, except on such terms and conditions as the reorganization managers may impose. Holders of refunding and adjustment mortgage bonds may deposit their securities with the Bankers Trust Company, Farmers Loan & Trust Company, or the American Exchange National Bank, depositaries under the plan.

ERIE.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to pledge $17,217,000 of first consolidated mortgage general lien bonds and $8,812,000 of general mortgage convertible bonds as collateral for notes.

The Erie has been authorized by the Interstate Commerce Commission to issue $8,200,000 of refunding and improvement mortgage 6 per cent bonds; to pledge with the Secretary of the Treasury as additional collateral $2,000,000 of first consolidated mortgage general lien bonds and $4,000,000 of refunding and improvement mortgage 6 per cent bonds; to pledge from time to time as collateral for notes $9,192,000 of refunding and improvement mortgage bonds; and to pledge temporarily with the Secretary of the Treasury $2,300,000 first consolidated mortgage general lien bonds.

FLORIDA WESTERN & NORTHERN.—*Acquisition.*—See Seaboard Air Line.

GEORGIA & FLORIDA.—*Acquisition.*—The receiver has applied to the Interstate Commerce Commission for authority to acquire control of the Statesboro Northern.

INTERNATIONAL-GREAT NORTHERN. — *Bonds.* — The Interstate Commerce Commission has authorized the authentication and delivery of $1,809,000 of first mortgage 30-year 6 per cent gold bonds, to be pledged from time to time as security for notes.

Acquisition.—See article on another page entitled "Control of I.-G. N. by Gulf Coast Lines Authorized."

KANSAS CITY SOUTHERN.—*Valuation.*—For the benefit of stockholders and creditors of the company, Samuel W. Moore, general counsel of the Kansas City Southern, has issued the following statement in connection with the valuation of that road's properties announced by the Interstate Commerce Commission June 12. (See article on another page).

The Kansas City Southern is not satisfied with the valuation of $49,016,268, as of June 30, 1914, placed upon its properties by the Interstate Commerce Commission. The company's evidence in its valuation proceeding, adduced before the Commission, indicated a valuation in 1914 of $80,000,000, and this the company feels is a fair and conservative valuation as of that date. In the ten years that have intervened there has been a very considerable increase in value, because of new moneys applied and because of increases in wages and cost of materials, so that the company's valuation at this time should be considerably in excess of that sum, certainly not less than $100,000,000.

The officers of the company feel that the Commission's valuation, if permitted to stand and to be used as a basis for the enforcement of the recapture provision of the Interstate Commerce Act, or as a basis for the consolidation of railroad properties, will inevitably result in confiscation on a large scale.

It is believed that the methods of valuation which have been applied by the Commission and which have resulted in this abnormally low valuation, are in sharp conflict with economic principles and with the rules laid down by the courts for the valuation of railroad properties. These methods of valuation have been a state secret until the recent decision of the Commission in its valuation of the Florida East Coast line (84 I. C. C. 41). Prior to that decision the Commission, in the 30 tentative valuations which it has issued, consistently failed to disclose its methods of valuation, beyond a general statement that all elements of value were given consideration; but in the Florida East Coast case Commissioners Potter and Cox, in a dissenting opinion, have made public the process by which the railroads of the country are being valued.

From the statement of these two commissioners, it appears that the Commission's method of valuation, now being applied by it, is to take cost of reproduction less depreciation, computed at 1914 prices, as a basis, add an arbitrary figure of approximately five per cent, add the value of lands and working capital, and to solemnly adjudge that the aggregate of these items is the value of railroad properties for all purposes under the Transportation Act, such as rate-making, recapture, consolidation, the issue of securities, and doubtless for other purposes of regulation not yet placed upon the statute books.

This rule of the Commission is applied to all roads alike—to the strong roads as well as to the weak roads. It makes no difference that one road is skillfully and economically managed, or that another is the victim of incompetence; that one is intelligently projected and constructed, or another improvidently built, with no traffic to support it; or that one possesses a large earning capacity, or that another fails to earn its operating expenses or is hopelessly insolvent. The same yardstick applies to all. No enhancement in value is given to a property for its strategic location, its large volume of traffic, its lower operating cost, or its efficient management, all of which are naturally reflected in its power to earn interest and dividends.

The officers of the company, with a sense of their obligation to its security holders, can not do otherwise than to contest, in the court of last resort, a valuation of their property compounded in this manner. Every one knows that this company's property handles a very considerable volume of traffic, with low operating costs and with earnings per mile which compare favorably with the strong roads in the country. These factors, in accordance with well-settled principles of law and under economic principles, as well as in the opinion of the business world generally, are elements which largely influence value. No valuation will be acceptable which does not take these elements into account.

(*Continued on page 1797*)

Annual Reports

Colorado & Southern Ry. Co. Twenty-fifth Annual Report

Chicago, January 2, 1924.

To the Stockholders of the Colorado and Southern Railway Company:

Herewith is submitted the Twenty-Fifth Annual Report of your Board of Directors for the year ended December 31, 1923, setting forth composite income statement and statistics of operation for Colorado and Southern Lines included in this report. Balance sheets, income account and other statements of the several companies comprising the Colorado and Southern Lines are shown separately in the report of the Comptroller.

COMPARATIVE STATEMENT OF INCOME, YEARS ENDED DECEMBER 31

Percent of Ry. Oper. Rev.	1923		1922	Percent of Ry. Oper. Rev.
		Railway Operating Revenues		
74.17	$17,697,340.36	Freight	$18,019,197.93	74.03
19.08	4,553,981.88	Passenger	4,576,875.62	18.81
1.65	392,835.95	Mail	402,455.56	1.65
1.75	417,374.52	Express	503,879.78	2.07
2.10	500,771.89	All other transportation	409,913.26	1.68
1.24	295,847.76	Incidental	338,510.35	1.39
.01	2,067.32	Joint facility	77,929.80	.32
100.00	$23,860,219.68	Total railway operating revenues	$24,328,762.30	100.00
		Railway Operating Expenses		
12.80	$3,053,896.37	Maintenance of way and structures	$3,069,244.31	12.62
24.05	5,738,076.82	Maintenance of equipment	5,340,286.02	21.95
1.33	317,395.93	Traffic	294,149.45	1.21
35.59	8,493,001.17	Transportation	8,717,020.40	35.83
.69	163,594.24	Miscellaneous operations	203,331.55	.84
3.99	951,562.89	General	956,704.84	3.93
.08 Cr.	18,062.90	Transportation for investment—Cr.	23,876.64	Cr. .10
78.37	$18,699,464.52	Total railway operating expenses	$18,556,859.93	76.28
21.63	$5,160,755.16	Net revenue from railway operations	$5,771,902.37	23.72
....	$1,321,188.03	Railway tax accruals	$1,337,228.53	....
....	12,697.92	Uncollectible railway revenue	5,277.34	....
....	$3,826,869.21	Railway operating income	$4,429,396.50	....
		Non-Operating Income		
....	$542,805.80	Hire of equipment	$291,674.99	....
....	45,990.04	Joint facility rent income	49,840.92	....
....	95,370.83	Miscellaneous rent income	83,175.02	....
....	586,397.39	Dividends and miscellaneous interest	655,445.00	....
....	2,367.56	Miscellaneous income	905.51	....
....	$1,272,931.62	Total non-operating income	$1,081,041.44	....
....	$5,099,800.83	Gross income	$5,510,457.94	....
		Deductions from Gross Income		
....	$252,600.68	Hire of equipment	$930,617.76	....
....	97,790.18	Joint facility rents	99,810.63	....
....	20,493.14	Miscellaneous rents	21,257.04	....
....	2,707,964.95	Interest on funded debt	2,633,647.10	....
....	8,540.72	Interest on unfunded debt	3,922.89	....
....	33,424.60	Amortization of discount on funded debt	30,558.86	....
....	54,440.89	Miscellaneous income charges	53,347.21	....
....	$3,175,255.16	Total deductions from gross income	$3,773,161.49	....
....	$4,065,274.19	Net railway operating income	$3,740,484.02	....
....	$1,924,545.67	Net income	$1,737,276.45	....
		Disposition of Net Income		
....	$680,537.04	Dividends	$680,552.44	....
....	$680,537.04	Total appropriations of income	$680,552.44	....
....	$1,244,008.63	Income balance	$1,056,724.01	....

GENERAL OPERATIONS

Revenues:		
Total Operating Revenues for 1923		$23,860,219.68
Total Operating Revenues for 1922		24,328,762.30
Decrease		$468,542.62— 1.93%
This decrease was made up as follows:		
Freight	Decreased	$321,857.57— 1.79%
Passenger	Decreased	22,893.74— .50%
Mail	Decreased	9,619.61— 2.39%
Express	Decreased	86,505.26—17.17%
Switching	Increased	84,141.36—27.79%
Other transportation	Increased	6,717.27— 6.27%
Incidental operating	Decreased	118,525.07—28.46%
Net Decrease		$468,542.62— 1.93%

The decrease in freight revenue was due principally to higher rates in effect during the first half of 1922, a decrease of 10% having been made effective July 1, 1922, applying to practically all commodities. Also, during the period July to October, there were serious interruptions in service on the northern line of the Colorado and Southern as well as on the lines of its principal northern connecting carriers, due to flood conditions. This caused the diversion of a large amount of traffic which ordinarily would be handled by Colorado and Southern Lines. On other portions of the system, substantial increases were made in freight revenues due to an increased volume of business handled.

The slight decrease in passenger revenues is due to loss of traffic on account of the flood conditions recited above, competition by automobile travel, and, in the southern territory, to decreased activity in the oil fields served by these lines.

The decrease in mail revenue is due principally to the change in the method of handling side mail service at the larger stations, such service now being performed by Contractors under agreement with the Government. This general decrease was partially offset by increase in emergency service and in regular service.

The decrease in express revenue is due to the payment in 1922 of adjusted proportions of amounts earned by the Express Company in years prior thereto, also to general decline in volume of traffic offered for shipment via express.

The increase in switching revenue is due to increased switching at Fort Collins of equipment for oil wells, at Leadville account increased activity at mines, at Denver of northern Colorado mines coal and slack to industries in Denver, and at Amarillo to U. S. Zinc Co. smelter on one of the system lines.

Increase in other transportation revenues is due principally to increased Pullman car earnings.

Decrease in revenues from Incidental Operations is due principally to decrease in dining car receipts, also from hotels and restaurants. There was also a considerable decrease in Joint Facility—Credits.

A comparison of tonnage by commodities with 1922 shows a net increase as follows:

Farm Products	Decreased	18,479 tons— 1.55%
Animals and Products	Decreased	5,812 tons— 2.16%
Mine Products	Increased	17,921 tons— .47%
Forest Products	Decreased	3,133 tons— .94%
Manufactured Products	Increased	360,301 tons—24.38%
Less-than-carload Tonnage	Increased	715 tons— .48%
Total tonnage	Increased	351,513 tons— 4.95%

A comparison of carloads shows:

Total cars (all commodities) in 1923	233,405 cars
Total cars (all commodities) in 1922	229,991 cars
Increase in 1923	3,414 cars— 1.48%

The increase in tonnage shows a general improvement in the total number of tons and cars handled, however, since a large proportion of such increased tonnage is in iron ore and sugar beets, which carry a low rate, there is not a corresponding increase in freight revenues. Also, due to diversions of traffic account of flood conditions, these lines had a shorter haul of certain interline business producing decreased revenues from increased car loads and tonnage.

There was a decrease in the movement of farm products, except sugar beets, due to more unfavorable crop conditions. Cotton tonnage declined largely, due to a large part of the 1921 cotton crop having moved in 1922.

Tonnage of animals and animal products decreased largely due to a decrease in the handling of live stock from Texas to northern points.

There was some increase in the movements of concentrates, also coke and fuel oil.

The slight decrease in movement of forest products is due principally to increased movement in 1922 of materials for the construction of new extension in Texas and Oklahoma.

The material increase in tonnage of manufactured products is due to heavier movement of rails and fastenings, iron, cement and refined petroleum and products.

Expenditures (Operating):

Total operating expenses—1923	$18,699,464.52
Total operating expenses—1922	18,556,859.93
Increase	$142,604.59— .77%

The slight increase in Operating Expenses is due almost entirely to increased maintenance of equipment. Owing to the shopmen's strike during the last half of 1922, leaving the equipment in a more or less impaired condition, also because of a concerted movement on the part of all carriers, a heavier maintenance of equipment program was carried on during the year 1923 to bring the equipment up to a high percentage condition. Also, during the year there were unusual flood conditions, however, notwithstanding, there were substantial decreases in other than maintenance of equipment expenses due to increased economies and efficiency.

The operating ratio was 78.37%, as compared with 76.28% in 1922, and 72.80% in 1921.

Expenditures (Capital):

There were during the year net expenditures chargeable to Capital Account:

For road	$740,079.24
For equipment ....Cr.	163,433.00
For general	973.70
Total	$577,619.94

Gross expenditures were made during the year amounting to approximately $1,895,000.00 in the physical development and improvement of the property and in additions and betterments to way, structures and equipment. In addition, charges in the amount of approximately $125,000.00 were made in Capital Accounts in completing the extension of the line from Byers, Texas, across the Red River to Waurika, Oklahoma, the total charges in the years 1922 and 1923, covering the cost of this extension being approximately $467,000.00. This new extension was placed in operation on March 1, 1923.

During the year equipment of a book value of approximately $950,000.00 was written out of the Capital Accounts, due principally to the equipment being worn out and of obsolete type, also to destruction by accident.

Also, during the year a portion of the narrow gauge line on the Gunnison District aggregating approximately 23.86 miles, was abandoned, and the ledger value was credited to Capital Accounts.

By order of the Board of Directors.

HALE HOLDEN,
President.

[ADVERTISEMENT]

Reading Company Twenty-sixth Annual Report for Fiscal Year Ended December 31, 1923

Philadelphia, Pa., April 16, 1924.

To the Stockholders of Reading Company:

The Board of Directors herewith submit their report for the year ended December 31, 1923:

INCOME ACCOUNT

The following shows the income for year ended December 31, 1923, in comparison with that of previous year:

	1923	1922
Income	$22,260,753.34	$20,594,742.63
Expenses	830,714.74	310,028.99
Net Income	$21,430,038.60	$20,284,713.64
Interest, taxes, etc	5,816,187.39	8,623,093.96
Surplus for year	$15,613,851.21	$11,661,619.68

The total corporate surplus of Reading Company, December 31, 1923, upon conclusion of merger of Philadelphia and Reading Railway Company and other subsidiary Companies was $80,529,030.26, of which $64,884,626.49 had been appropriated, leaving as shown by consolidated balance sheet, an unappropriated balance of $15,644,403.77.

DIVIDENDS

The following dividends were paid upon the shares of Reading Company during the fiscal year ended December 31, 1923, from the earnings of the Company for the fiscal year ended December 31, 1922:

FIRST PREFERRED STOCK

Date of Declaration	Rate per cent of Dividend	Date of payment to Stockholders
January 5, 1923	1	March 8, 1923
April 18, 1923	1	June 14, 1923
June 20, 1923	1	September 13, 1923
October 10, 1923	1	December 13, 1923

SECOND PREFERRED STOCK

Date of Declaration	Rate per cent of Dividend	Date of payment to Stockholders
December 20, 1922	1	January 11, 1923
February 21, 1923	1	April 12, 1923
May 9, 1923	1	July 12, 1923
September 17, 1923	1	October 11, 1923

COMMON

Date of Declaration	Rate per cent of Dividend	Date of payment to Stockholders
December 20, 1922	2	February 8, 1923
March 21, 1923	2	May 10, 1923
June 20, 1923	2	August 9, 1923
September 17, 1923	2	November 8, 1923

Before declaring the quarterly dividend of 2% upon the Common Stock, payable February 14, 1924, the Board, pursuant to the terms of the issue of the First Preferred and Second Preferred shares, made provision for dividends payable during the year 1924 from the earnings of the fiscal year ended December 31, 1923, as follows:

On the First Preferred Stock the sum of $1,120,000 was appropriated for the payment of quarterly dividends upon that Stock, as follows:

Per Cent	Payable
1	March 13, 1924
1	June 12, 1924
1	September 11, 1924
1	December 11, 1924

On the Second Preferred Stock, a quarterly dividend of 1% was declared, payable January 10, 1924, and the sum of $1,260,000 was set apart to make provision for the following additional quarterly dividends upon that Stock:

Per Cent	Payable
1	April 10, 1924
1	July 10, 1924
1	October 9, 1924

EQUIPMENT

The following equipment was received during the year 1923 and placed in service, thus completing the equipment included in Equipment Trust Series "J":

100 steel underframe refrigerator cars,
5 steel baggage cars,
5 steel baggage and mail cars.

Reading Company acquired during the year the floating elevators and grain barges formerly operated by the Philadelphia Harbor Transfer. These vessels have been continued in the harbor transfer service at Philadelphia.

Reading Company also acquired during the year, independently of Equipment Trusts, the following equipment, including that in the Harbor Transfer service above mentioned:

726 Steel Gondolas
2 Floating Elevators
5 Grain Barges
6 House Lighters
104 Company's Service Cars
1 Automobile
4 Auto Trucks
4 Steel Locomotive Cranes
1 Steel Ram Car

A new Equipment Trust, known as Reading Company Equipment Trust Series K, dated March 1, 1923, was created to acquire equipment costing approximately $10,000,000, and the following equipment was delivered thereunder during the year 1923:

2 ferryboats
2 gasoline cars
4 cars floats
40 steel suburban cars
10 steel suburban combination cars
5 Pacific type locomotives
19 Consolidation locomotives
274 steel gondola cars

Expenditures aggregating $3,749,715.62 had been made by the Lessor under Equipment Trust Series K at the close of the fiscal year ended December 31, 1923, but no obligations were issued under this Trust. Additional equipment under this Trust will be delivered during the year 1924.

The Philadelphia and Reading Railway Company, which heretofore leased practically all the equipment owned by Reading Company, or which was being acquired by Reading Company through Equipment Trusts, performed all its obligations in 1923 in respect to the maintenance and replacement of equipment.

THE WILLIAMS VALLEY RAILROAD COMPANY

The issue of $120,000 First Mortgage bonds of The Williams Valley Railroad Company, dated March 17, 1904, matured December 1, 1923. With the approval of the Interstate Commerce Commission, this issue of bonds was extended to December 1, 1938, with interest reduced to 4% per annum. The guarantee of Reading Company as to the payment of the principal and interest on these bonds was endorsed thereon.

NEW TERMINAL AT CAMDEN, N. J.

The construction of new terminal facilities on the Delaware River front at Kaighn's Point, Camden, N. J., was vigorously prosecuted during the year 1923. This terminal property is expected to be ready for operation early in the summer of 1924.

It is proposed that the terminal property, with all its facilities, shall be conveyed to the Atlantic City Railroad Company subject to the lien of a Purchase Money Mortgage to be acquired by Reading Company.

GENERAL MORTGAGE SINKING FUND

Prior to the payment on January 11, 1923, of the dividend of one per cent upon the Second Preferred Stock, Reading Company paid to the Trustee of the General Mortgage $310,263.69, being the amount required for the Sinking Fund, and which represented five cents per ton on all anthracite coal mined during the calendar year 1922 from lands owned and controlled by The Philadelphia and Reading Coal and Iron Company and pledged under the General Mortgage. This sum was paid out of surplus earnings and was applied by the Trustee to the purchase and cancellation of $361,000 General Mortgage bonds hereinafter referred to.

Under the provisions of the Third Modified Plan of Segregation, no further payments are required to be made by Reading Company on account of the General Mortgage Sinking Fund, and the $361,000 General Mortgage bonds purchased and cancelled during the year through the Sinking Fund have been deducted from the proportionate amount of two-thirds of the General Mortgage bonds for which Reading Company became liable.

FUNDED INDEBTEDNESS

The funded indebtedness of Reading Company was decreased during the year ended December 31, 1923, as follows:		$31,913,533.33
General Mortgage Bonds allocated to The Philadelphia and Reading Coal and Iron Company under Third Modified Plan for the segregation of the Reading Company properties, as approved by decree of the District Court of the United States for the Eastern District of Pennsylvania, filed June 28, 1923	$31,542,333.33	
General Mortgage Bonds cancelled through Sinking Fund	361,000.00	
Mortgages and Ground Rents on real estate cancelled	10,200.00	
	$31,913,533.33	

The General Balance Sheet reflects the outstanding Funded Debt, less bonds held in the Treasury.

EQUIPMENT TRUST OBLIGATIONS

At the close of the fiscal year ended December 31, 1922, there were outstanding Equipment Trust obligations to the extent of $23,283,735.95 issued by The Pennsylvania Company for Insurances on Lives and Granting Annuities, Trustee, under the so-called Philadelphia Plan. These obligations were reduced during the year as follows:

	Outstanding Dec. 31, 1922	Payments	Outstanding Dec. 31, 1923
Equipment Trust Series F..	$2,400,000.00	$600,000.00	$1,800,000.00
Equipment Trust Series G..	4,050,000.00	900,000.00	3,150,000.00
Equipment Trust Series H..	1,520,000.00	190,000.00	1,330,000.00
Equipment Trust Series I...	7,003,735.95	1,603,735.95	5,400,000.00
Equipment Trust Series J...	8,310,000.00	830,000.00	7,480,000.00
	$23,283,735.95	$4,123,735.95	$19,160,000.00

EQUITY PROCEEDINGS BY UNITED STATES GOVERNMENT

On January 30, 1923, Reading Company and The Philadelphia and Reading Coal and Iron Company, pursuant to order of the District Court of the United States for the Eastern District of Pennsylvania, entered June 30, 1922, submitted to the Court for its consideration the Second Modified Plan for the modification of the decree of the Court entered June 6, 1921, to comply with the directions contained in the Mandates of the Supreme Court of the United States, together with a supplement to the Second Modified Plan. The District Court, on January 30, 1923, entered an order directing the filing with it on or before February 20, 1923, of any objections which might be had to the Second Modified Plan. Objections having been filed by interested parties, the Court, by order entered April 7, 1923, set May 10, 1923, for a hearing on these objections and the taking of testimony. At the hearing on May 10 and 11, 1923, the Companies submitted for the consideration of the Court a further plan, designated as the Third Modified Plan, which contained the following principal provisions:

1. Closing the Joint General Mortgage of Reading Company and The Philadelphia and Reading Coal and Iron Company dated January 5, 1897, at $94,627,000.

2. Payment of a dividend of $6,000,000 by the Reading Iron Company and the sale by Reading Company to The Philadelphia and Reading Coal and Iron Company of all its right, title and interest in and to the stock of the Reading Iron Company for the sum of $8,000,000.

3. Fixing the liability of Reading Company on the $94,627,000 principal amount of General Mortgage bonds outstanding November 30, 1922, at two-thirds thereof, or $63,084,666⅔, and the liability of The Philadelphia and Reading Coal and Iron Company at one-third thereof, or $31,542,333⅓.

4. Assumption by The Philadelphia and Reading Coal and Iron Company of the Sinking Fund under the joint General Mortgage of January 5, 1897.

5. Assumption by The Philadelphia and Reading Coal and Iron Company of liability on account of the $810,000 The Philadelphia and Reading Railroad Company Ten-Year Sinking Fund Collateral Gold Bonds of 1892, extended to February 1, 1932.

Assumption of obligation by Reading Company on account of $5,766,717 The Philadelphia and Reading Railroad Company First Series Consolidated Mortgage Bonds of 1882, extended to March 1, 1937.

6. Fixing the separate responsibility of each Company under the General Mortgage in the event of default and foreclosure.

7. Payment by The Philadelphia and Reading Coal and Iron Company to Reading Company of $10,000,000 in cash or current assets at market value and the execution of general releases of all claims and liabilities as between Reading Company and The Philadelphia and Reading Coal and Iron Company.

Payment by Reading Company to The Philadelphia and Reading Coal and Iron Company of $2,500,000 account current indebtedness.

8. Sale by Reading Company to a new corporation, to be organized for the purpose (Philadelphia and Reading Coal and Iron Corporation), of all its right, title and interest in and to the stock of The Philadelphia and Reading Coal and Iron Company for the sum of $5,600,000, and the sale by the new corporation of its 1,400,000 shares of stock, without nominal or par value, to the stockholders of Reading Company at the rate of $4.00 per share; each stockholder of Reading Company being permitted to subscribe to an assignable certificate of interest in one share of the new corporation for each two shares of Reading Company held by him.

Reading Company to adopt a by-law, effective until the further order of the Court, permitting the registration of transfers of shares of its capital stock in the names only of the persons who shall make an affidavit that they are not stockholders, registered or actual, in either the Coal Company or the new Coal Corporation.

9. The merger of the Philadelphia and Reading Railway Company into Reading Company and the subjection of the Railway Company's property to the direct lien of the General Mortgage. Reading Company to accept the Pennsylvania Constitution of 1874 and proceed under the Act of 1856 to surrender those of its powers inappropriate for a railroad corporation of Pennsylvania.

10. Reading Company to execute a new mortgage constituting a lien, subject to the General Mortgage, upon all the railroads, railroad property, railroad equipment and stocks and bonds of other railroad companies then owned by Reading Company, but not including the shares of The Central Railroad Company of New Jersey.

Certain subsidiary railroad companies, other than the Philadelphia and Reading Railway Company, of which Reading Company owns the entire capital stock, to be acquired and subjected to the new mortgage. The new mortgage to provide for an issue of bonds to be known as Series A, bearing 4½% interest per annum, limited to the aggregate principal amount of $63,084,666⅔, to be used in retiring Reading Company's proportion of the old General Mortgage 4% bonds through exchange at par.

The Philadelphia and Reading Coal and Iron Company to execute a new mortgage, bearing interest at 5% per annum, under which there will be issued $31,542,333⅓ bonds to retire through exchange at par a similar amount of joint General Mortgage 4% bonds for which the Coal Company is liable.

On May 22, 1923, the District Court entered its order approving the Third Modified Plan as a plan for the modification of the decree entered June 6, 1921. On June 28, 1923, the final decree of the District Court, approving the Third Modified Plan, was filed.

By order entered July 18, 1923, the District Court approved the appointment of Messrs. Edward T. Stotesbury, Agnew T. Dice, Joseph E. Widener, Seward Prosser and Adrian Iselin as a special proxy committee to vote the shares of Reading Company at the special meeting of the stockholders called to convene at Philadelphia on October 15, 1923, to take the requisite corporate action for carrying out the provisions of the decree entered June 28, 1923.

Under the provisions of section 10 of the Third Modified Plan, a form of General and Refunding Mortgage was prepared by Reading Company for submission to its stockholders covering the issuance of 4½% Series A bonds to retire the $63,084,666⅔ of General Mortgage 4% bonds for which it had been determined that Reading Company was liable. The form of mortgage was approved by the District Court by order entered October 12, 1923, and was thereupon presented to the stockholders of Reading Company and approved at the special meeting held October 15th, 1923.

At the special meeting held October 15, 1923, the stockholders of Reading Company also expressed their approval of the following provisions of the plan:

The merger of the Philadelphia and Reading Railway Company and twelve other subsidiary railroad companies into Reading Company.

The surrender by Reading Company of those of its powers which are inappropriate for a railroad corporation of Pennsylvania.

The acceptance by Reading Company of the Pennsylvania Constitution of 1874.

The sale of the stock of the Reading Iron Company to The Philadelphia and Reading Coal and Iron Company.

The sale of the stock of The Philadelphia and Reading Coal and Iron Company to the Philadelphia and Reading Coal and Iron Corporation about to be organized.

General settlement with The Philadelphia and Reading Coal and Iron Company.

The offer to the stockholders of Reading Company to subscribe to the 1,400,000 shares of stock without nominal or par value of the new Philadelphia and Reading Coal and Iron Corporation.

The offer to the bondholders to exchange their General Mortgage 4% bonds for the new General and Refunding Mortgage 4½% bonds of Reading Company and the new Refunding Mortgage 5% bonds of The Philadelphia and Reading Coal and Iron Company.

The adoption by the Board of Directors of a by-law restricting the transfer of shares of stock of the Company as provided in the plan and Final Decree.

Pursuant to the provisions of section 9 of the Third Modified Plan, Reading Company entered into an agreement with the

Philadelphia and Reading Railway Company,
The Chester and Delaware River Railroad Company,
Middletown and Hummelstown Railroad Company,
The Rupert and Bloomsburg Railroad Company,
The Tamaqua, Hazleton and Northern Railroad Company,
The Norristown Junction Railroad Company,
The Philadelphia and Frankford Railroad Company,
The Philadelphia, Harrisburg and Pittsburgh Railroad Company,
The Schuylkill and Lehigh Railroad Company,
Shamokin, Sunbury and Lewisburg Railroad Company,
New York Short Line Railroad,
Norristown and Main Line Connecting Railroad Company, and
Reading Belt Railroad

on October 1, 1923, for the merger of the several companies into Reading Company. This action was likewise approved at the special meeting of the stockholders held October 15, 1923.

Reading Company, on November 9, 1923, made application to the Interstate Commerce Commission for the necessary authority to issue $63,084,666⅔ General and Refunding Mortgage 4½% bonds, and for the merger of the several companies as provided by the Third Modified Plan. Similar application was made to the Public Service Commission of Pennsylvania on account of the proposed merger.

The District Court, on December 4, 1923, entered its order approving the appointment of the Wilmington Trust Company, Wilmington, Delaware, as Trustee, to hold the shares of the proposed new coal corporation to be incorporated under the laws of the State of Delaware, pending the distribution of said shares to the parties entitled to receive them. The new Philadelphia and Reading Coal and Iron Corporation was accordingly incorporated in Delaware on December 19, 1923.

The Public Service Commission of the Commonwealth of Pennsylvania issued on December 18, 1923, its Certificate of Public Convenience approving the proposed merger of the Philadelphia and Reading Railway Company and certain other subsidiaries into Reading Company.

The Interstate Commerce Commission, by Order entered December 26, 1923, approved the proposed issue of General and Refunding Mortgage 4½%, Series A, bonds of Reading Company and the merger of the Philadelphia and Reading Railway Company and certain other subsidiaries into Reading Company.

In connection with its merger into Reading Company, application was made by the Philadelphia and Reading Railway Company to the Board of Public Utility Commissioners of New Jersey, on November 21, 1923, for approval of the disposition of its property situated in the State of New Jersey, and of its leasehold interest in the lines of railroad of The Delaware and Bound Brook Railroad Company. The necessary authority was granted by the Commissioners.

On December 28, 1923, the sale by Reading Company to The Philadelphia and Reading Coal and Iron Company of the shares of the Reading Iron Company was consummated, as was also the sale by Reading Company to Philadelphia and Reading Coal and Iron Corporation of the shares of The Philadelphia and Reading Coal and Iron Company. Final settlement was also made on that date between Reading Company and The Philadelphia and Reading Coal and Iron Company as provided in the Plan, and a general release of claims between these companies was executed.

Reading Company on December 28, 1923, formally accepted the Constitution of the Commonwealth of Pennsylvania, and on December 31st, upon decree of the Court of Common Pleas, Philadelphia, surrendered those of its corporate powers which were inappropriate for a railroad corporation of Pennsylvania.

MERGER

The agreement of merger between Reading Company,

Philadelphia and Reading Railway Company,
The Chester and Delaware River Railroad Company,
Middletown and Hummelstown Railroad Company,
The Rupert and Bloomsburg Railroad Company,
The Tamaqua, Hazleton and Northern Railroad Company,
The Norristown Junction Railroad Company,
The Philadelphia and Frankford Railroad Company,
The Philadelphia, Harrisburg and Pittsburgh Railroad Company,
The Schuylkill and Lehigh Railroad Company,
Shamokin, Sunbury and Lewisburg Railroad Company,
New York Short Line Railroad,
Norristown and Main Line Connecting Railroad Company, and
Reading Belt Railroad,

which had been entered into on October 1, 1923, was duly filed with the Secretary of the Commonwealth of Pennsylvania, and on December 31, 1923, Letters Patent issued to Reading Company.

Through the consummation of the merger of the several carriers into Reading Company, that company became the operating company and assumed such operation January 1, 1924. The Board of Directors of Reading Company appointed, effective on that date, the following general officers, together with the necessary subordinate officers, to conduct the business of Reading Company as a carrier:

Chairman of the Board	Edward T. Stotesbury
President	Agnew T. Dice
Assistant to the President	John F. Auch
Vice President, in Charge Operation and Maintenance, and Passenger Traffic	Charles H. Ewing
Vice President, in Charge of Freight Traffic	Edgar D. Hilleary
Secretary	Jay V. Hare
Assistant Secretary	Harry S. Fisher
Treasurer	Harry E. Paisley
Assistant Treasurer	John S. Sneyd
General Counsel	Charles Heebner
General Solicitor	William L. Kinter
Comptroller	Albert B. Bierck
Purchasing Agent	John D. Landis
General Manager	Frederick M. Falck
General Superintendent	Victor B. Fisher
Assistant General Superintendent	R. Boone Abbott
Engineer Maintenance of Way	John C. Wrenshall, Jr.
Superintendent Motive Power and Rolling Equipment	Irwin A. Seiders
Superintendent Transportation	Augustus T. Owen
Superintendent Telegraph	Llewellyn D. Shearer
Real Estate Agent	Gordon Chambers
Assistant Real Estate Agent	Charles E. Dilkes, Jr.
Chief Engineer	Samuel T. Wagner
Assistant Chief Engineer	Clark Dillenbeck
Assistant Chief Engineer	Frederick Jaspersen
Passenger Traffic Manager	Edwin L. Lewis
Assistant Passenger Traffic Manager	Edson J. Weeks
General Passenger Agent	Edward D. Osterhout
Assistant General Passenger Agent	George F. Ingram
Freight Traffic Manager	Harry C. Stauffer
Assistant Freight Traffic Manager	John W. Hewitt
General Freight Agent	Richard C. Campbell
Assistant General Freight Agent	L. Roland Jones
General Coal Freight Agent	Charles C. Rambo
Coal Freight Agent	William B. Gheen
Transfer Agent	Frederick Reel
Assistant Transfer Agent	Pearson N. Yeager
General Claim Agent	William C. Brister
Assistant General Claim Agent	Thomas W. Fister
Freight Claim Agent	William J. Wilson

The statements contained in this report relate to Reading Company as of December 31, 1923, prior to the merger of the Philadelphia and Reading Railway Company and the twelve other subsidiary railroad Companies into Reading Company, which merger, became effective January 1, 1924.

In order that the financial condition of the merged Company may be more clearly indicated, there is inserted on pages 12 and 13, a balance sheet showing the condition of the Company on December 31, 1923, prior to the merger of the Philadelphia and Reading Railway Company and other Companies, and on pages 20 and 21 a consolidated balance sheet showing the condition of the Company upon the consummation of the merger December 31, 1923.

PHILADELPHIA AND READING RAILWAY COMPANY

The Philadelphia and Reading Railway Company having been merged into Reading Company at the close of business December 31, 1923, no separate report of that Company will be issued, but there is appended to this report, as a matter of record, a full report of the operations of the Philadelphia and Reading Railway Company for the fiscal year 1923.

The Board of Directors is gratified at the splendid results obtained in 1923; and it hereby expresses to the officers and employees of the Company its sincere appreciation of the earnestness and ability with which their several duties were performed, making possible the achievement of these results.

By order of the Board of Directors,

AGNEW T. DICE,
President

READING COMPANY

INCOME FOR YEAR ENDED DECEMBER 31, 1923, AND COMPARISON WITH PREVIOUS YEAR

	Calendar Year 1923	Calendar Year 1922
Income:		
Dividend Income	$14,817,087.43	$12,330,832.71
Income from Funded Securities	1,868,256.17	1,895,133.44
Income from Unfunded Securities and Accounts	225,585.68	77,354.98
Rent of Equipment	4,930,696.66	5,886,150.36
Miscellaneous Rent Income	411,604.09	393,986.18
Release of Premiums on Funded Debt	7,523.31	11,284.96
	$22,260,753.34	$20,594,742.63
Expenses:		
Contingent (including Segregation Expenses)	830,714.74	310,028.99
	$21,430,038.60	$20,284,713.64
Deductions from Income:		
Interest on Funded Debt	$2,404,006.46	$3,717,251.72
Interest on Unfunded Debt	396,080.59	1,883,667.37
Interest on Reading Co.—Jersey Central Collateral Gold Bonds	920,000.00	920,000.00
Interest on Wilmington & Northern R. R. Stock Trust Certificates	51,800.00	51,800.00
Interest on Real Estate Bonds	97,353.19	74,289.28
Rental of Leased Equipment	831,133.31	564,102.66
Amortization of Discount on Funded Debt	27,007.50	13,503.75
Taxes	1,088,806.34	1,398,479.18
	$5,816,187.39	$8,623,093.96
Net Income	$15,613,851.21	$11,661,619.68

READING COMPANY

GENERAL BALANCE SHEET, DECEMBER 31, 1923

Prior to Merger of Philadelphia and Reading Railway Company and Other Subsidiaries

ASSETS

	Amount	Total
Investments—		
Railroad Equipment:		
Locomotive Engines and Cars	$49,527,076.23	
Floating Equipment:		
Sea Tugs, Barges, etc.	5,220,142.00	
		$54,747,218.23
Leased Equipment		44,805,676.84
Ferry Boats "Haddon Heights" and "Ventnor"		632,928.04
Real Estate		15,919,594.78
Deposits in Lieu of Mortgaged Property Sold		1,323.50
New Camden Terminal		1,871,164.47
Leasehold Rights, Gloucester Ferry Company		32,472.75
Bonds:		
Philadelphia & Reading Railway Company's Bond	$20,000,000.00	
Bonds of Sundry Companies	23,271,687.65	
		43,271,687.65
Stocks:		
Philadelphia & Reading Railway Company's Stock	$42,481,700.00	
Stocks of Sundry Companies	53,608,988.33	
		96,090,688.33
Advances to Affiliated Companies		5,344,209.97
The Philadelphia & Reading Coal and Iron Corporation		5,600,000.00
Total Investments		$268,316.964.56
Current Assets—		
Cash	$12,766,255.78	
Loans and Bills Receivable	283,298.00	
Special Deposits	1,190,840.00	
Interest and Dividends Receivable	864,733.72	
U. S. Capital Stock Tax Paid in Advance	76,678.50	
Rents Receivable	12,173.03	
Miscellaneous Accounts Receivable	533,399.24	
Other Current Assets	626,864.07	
		16,354,242.34
Unadjusted Debits		238,979.12
		$284,910,186.02

READING COMPANY

GENERAL BALANCE SHEET, DECEMBER 31, 1923

Prior to Merger of Philadelphia and Reading Railway Company and Other Subsidiaries

LIABILITIES

		Amount	Total
First Preferred		$28,000,000.00	
Second Preferred		42,000,000.00	
Common		70,000,000.00	
		$140,000,000.00	
Less held in Treasury		43,450.00	
			$139,956,550.00
Funded Debt			
General Mortgage Loan 1897-1997:			
Total Issued	$106,174,000.00		
Less Bonds purchased and canceled for Sinking Fund	11,908,000.00		
	$94,266,000.00		
Less Bonds assumed by Phil. & Reading Coal & Iron Co.	31,542,333.33		
	$62,723,666.67		
Less held in Treasury	2,011,333.33		
		$60,712,333.34	
Reading Company - Jersey Central Collateral Gold Bonds	$23,000,000.00		
Less held in Treasury	1,056,000.00		
		21,944,000.00	
Bonds and Mortgages on Real Estate		522,185.28	
Delaware River Terminal Bonds		500,000.00	
Delaware River Terminal Extension Bonds		534,000.00	
Wilmington & Northern R. R. Stock Trust Certificates		1,295,000.00	
Bonds—Locomotive Shops, Reading (In Treasury)	$1,200,000.00		
Philadelphia & Reading Railway Co. Debenture Bond		2,019,728.12	
			87,527,246.74
Equipment Trust Obligations (Series "F")		$1,800,000.00	
Equipment Trust Obligations (Series "G")		3,150,000.00	
Equipment Trust Obligations (Series "H")		1,330,000.00	
Equipment Trust Obligations (Series "I")		5,400,000.00	
Equipment Trust Obligations (Series "J")		7,480,000.00	
			19,160,000.00
Horatio G. Lloyd, Equipment Trust Series "K"			3,749,715.62
Current Liabilities:			
Accounts Payable		$289,340.47	
Bills Payable		2,800,000.00	
Accrued Interest and Rentals not due		1,882,369.97	
Tax Liability		820,956.40	
Interest Matured and Unpaid		1,194,280.00	
			6,986,946.84
Philadelphia & Reading Railway Company a/c Improvements to Leased Equipment			2,545,164.00
Philadelphia & Reading Railway Company a/c Advances to Controlled Companies			6,260,875.40
Sinking Fund General Mortgage Loan			819.13
Unadjusted Credits			378,408.85
Reserve for Replacement of Equipment			11,047,215.87
Reserve for Segregation Expenses			124,564.97
Corporate Surplus:			
Funded Debt Retired through Surplus		$1,714,000.00	
Profit and Loss		5,458,678.60	
			7,172,678.60
			$284,910,186.02

READING COMPANY

PROFIT AND LOSS ACCOUNT FOR FISCAL YEAR ENDED DECEMBER 31, 1923

	Dr.	Cr.
Balance December 31, 1922		$37,012,139.08
Income for Year ended December 31, 1923		15,613,851.21
Miscellaneous Adjustments		434,143.46
Dividend on First Preferred Stock	$1,120,000.00	
Dividend on Second Preferred Stock	1,680,000.00	
Dividend on Common Stock	5,600,000.00	
Adjustment Required Account Segregation of Coal and Iron Properties	23,214,684.66	
Revaluation of Claims against Affiliated Companies	15,986,770.49	
Balance December 31, 1923	5,458,678.60	
	$53,060,133.75	$53,060,133.75
Balance forward to January 1, 1924		$5,458,678.60

(*Continued from page* 1792)

Maryland & Delaware Coast.—*Securities.*—This company has applied to the Interstate Commerce Commission for authority to issue 17,500 shares of stock without par value and $350,000 of 20-year sinking fund 6 per cent bonds.

Minneapolis, St. Paul & Sault Ste. Marie.—*Notes Sold.*—Dillon, Read & Co. and the National City Company have placed privately $1,500,000 2-year 5 per cent notes.

Mobile & Ohio.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon a branch line from Delchamps to Alabama Port, Ala., with a spur making a mileage of 4.73.

Muscatine, Burlington & Southern.—*Abandonment.*—This company abandoned operations on June 13 after 25 years of continual losses during which five different receiverships have been established. Discontinuance of operation was ordered by Judge E. V. Jackson, in the District Court of Muscatine, Iowa.

New Orleans, Texas & Mexico.—*Acquisition of I.-G. N.*—See article on another page entitled "Control of I.-G. N. by Gulf Coast Lines Authorized."

Oklahoma City-Ada-Atoka.—*Lease.*—This company has applied to the Interstate Commerce Commission for authority to lease the Oklahoma City-Shawnee Interurban, from Oklahoma City to Shawnee, Okla., 34.46 miles.

Roanoke.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority for the abandonment of that part of its line from Brunswick to Homers, Va., 8.5 miles.

Salina & Santa Fe.—*Acquisition.*—The Interstate Commerce Commission has issued a certificate authorizing this company to acquire by purchase a line formerly owned by the Salina Northern, from Salina to Osborne, Kan., 81 miles, and has also authorized an issue of $300,000 of common stock to be sold at par and the proceeds used in connection with the purchase.

Seaboard Air Line.—*Florida Line.*—This company has applied to the Interstate Commerce Commission for authority for the acquisition under lease and by acquisition of the stock, of control of the Florida Western & Northern, and also for the assumption of liabilities incident to such acquisition. The Florida Western & Northern has had pending before the commission an application for a certificate authorizing the construction or acquisition of 238 miles of line, extending from a connection with the Seaboard at Coleman, Fla., to West Palm Beach, and has now applied for authority to issue $5,000 of capital stock, 10,000 shares of no par value stock, and $7,000,000 of first mortgage sinking fund 7 per cent gold bonds. The Seaboard is to acquire the stock and guarantee the bonds, which have been sold to Dillon, Read & Co., at 92½. The proposed lines, in addition to that from Coleman to West Palm Beach, 204 miles, include lines from Gross to Callahan, 13 miles; Anthony to Ocala, 7 miles, Valrico to Welcome Junction, 11 miles, and a 3-mile spur.

St. Louis-San Francisco.—*Equipment Trusts Offered.*—Paine, Webber & Co., J. S. Bache & Co., A. B. Leach & Co., and Hornblower & Weeks are offering $3,516,700 St. Louis-San Francisco equipment trust 6 per cent gold notes (stamped subordinate in lien to $7,031,200, unstamped prior lien notes), due $519,700 annually January 15, 1925 to 1935 inclusive, to yield from 4.50 to 5.65 per cent.

ST. LOUIS SOUTHWESTERN.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to nominally issue $1,460,000 first terminal and unifying mortgage gold bonds.

TRANS-FLORIDA.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to acquire the Fellsmere Railroad, now owned by the Standard Agricultural Chemical Corporation.

TEXAS PACIFIC-MISSOURI PACIFIC TERMINAL RAILROAD OF NEW ORLEANS.—*Change in Name.*—At a meeting of the board of directors of the Trans-Mississippi Terminal Railroad which operates the jointly owned terminal facilities of the Missouri Pacific and the Texas & Pacific in and about the city of New Orleans, the name of the terminal company was changed to the Texas Pacific-Missouri Pacific Terminal Railroad of New Orleans. J. M. Egan, vice-president and general manager of the Missouri Pacific, was elected a director and vice-president of the terminal company.

TRANS-MISSISSIPPI TERMINAL.—*Names Changed.*—See item relating to Texas Pacific-Missouri Pacific Terminal Railroad of New Orleans.

VIRGINIAN.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to pledge $4,500,000 first mortgage 5 per cent bonds and $1,500,000 Virginia & Western first mortgage 5 per cent bonds to secure a loan of $4,000,000 from the National City Bank of New York.

WYANDOTTE TERMINAL.—*Federal Control Status.*—A board of referees appointed by the Interstate Commerce Commission to determine the amount of compensation, if any, due to this company for the first six months of the federal control period, has dismissed a motion made on behalf of the director general of railroads to dismiss the case on the ground that possession of the railroad had not been taken by the government in such a manner as to entitle it to just compensation therefor. The board held that the railroad was taken over and that a loss to it resulted, declining to regard as a precedent controlling this case the recent decision of the court of claims in the Marion & Rye Valley case, in which it was held that the Marion & Rye Valley had not been taken over to such an extent as to entitle it to compensation.

WYOMING & COLORADO SHORT LINE.—*Incorporation.*—The Wyoming & Colorado Short Line, which proposes the construction of a railroad from Casper, Wyo., to Craig, Colo., has been incorporated in the state of Colorado by John E. Hayes, Denver, Colo.; C. B. Duffy and W. J. Thom, Buffalo, Wyo.; Lee Hunt, L. M. Vreeland, R. C. Healy and K. J. Hunt, Kansas City, Mo., and J. R. White, D. H. Holmes, John Coffin and R. A. Pridham of Los Angeles, Cal. The company plans to begin construction this summer.

Dividends Declared

Chicago & North Western.—Common, 2 per cent; preferred, 3½ per cent; both payable July 15 to holders of record June 19.

Chicago, Indianapolis & Louisville.—Common, 2 per cent; preferred, 2 per cent, semi-annually; both payable July 10 to holders of record June 28.

Cincinnati, New Orleans & Texas Pacific.—Common, 3 per cent, semi-annually; common (extra), 3½ per cent; both payable June 26 to holders of record June 17.

El Paso & Southwestern.—1¼ per cent, quarterly, payable July 2 to holders of record June 25.

Mobile & Ohio.—3½ per cent, payable June 30 to holders of record June 20.

Philadelphia & Western.—Preferred, 1¼ per cent, payable July 15 to holders of record June 30.

Reading Company.—Common, 2 per cent, quarterly, payable August 14 to holders of record July 21. First preferred, 1 per cent, quarterly, payable September 14 to holders of record August 25.

Southern Canada.—Preferred, 1¾ per cent, quarterly, payable June 30.

Southern Railway.—Common, 1¼ per cent, quarterly, payable August 1 to holders of record July 10; preferred, 1¼ per cent, quarterly, payable July 15 to holders of record June 25.

Trend of Railway Stock and Bond Prices

	June 17	Last Week	Last Year
Average price of 20 representative railway stocks	66.23	65.08	63.73
Average price of 20 representative railway bonds	87.60	86.38	83.25

Railway Officers

Executive

Ralph G. Richardson has been appointed assistant to the vice-president of the Long Island, with headquarters at New York.

J. M. Egan, vice-president and general manager of the Missouri Pacific has also been elected vice-president of the Texas Pacific-Missouri Pacific Terminal Railroad of New Orleans, which was formerly the Trans-Mississippi Terminal Railroad.

A. C. Johnson, vice-president in charge of traffic of the Chicago & North Western, with headquarters at Chicago, has also been elected vice-president in charge of traffic of the Chicago, St. Paul, Minneapolis & Omaha, with the same headquarters.

J. W. Newell, comptroller of the Wabash, with headquarters at St. Louis, Mo., has been elected vice-president and comptroller, with the same headquarters, succeeding L. G. Scott, vice-president in charge of accounts, who has resigned to engage in other business.

O. B. Webb, whose promotion to assistant to the president of the Texas & Pacific, with headquarters at New Orleans, La., was reported in the *Railway Age* of May 31, was born on December 13, 1873, at Roswell, Ga. He entered railway service in January, 1887, as a messenger boy in the operating department of the Texas & Pacific. Later in that year he was transferred to the general passenger office and in May, 1889, was promoted to stenographer in the office of the superintendent of transportation. He was promoted to secretary to the vice-president and general manager in May, 1892, and in 1899 was promoted to assistant chief clerk. Mr. Webb was promoted to city passenger and ticket agent at New Orleans, La., in 1904, and he held this position until 1910, when he was promoted to district passenger and ticket agent. During the period of government operation, Mr. Webb was appointed superintendent of safety, and in March, 1920, he was promoted to assistant general passenger agent, with headquarters at Dallas. He remained in that position until his recent promotion to assistant to the president.

A. M. Calhoun, whose election as vice-president and assistant to the president of the Kansas City Southern, with headquarters at Kansas City, Mo., was reported in the *Railway Age* of June 14, was born on May 1, 1871, at Nebraska City, Neb., and entered railway service in September, 1890, as a clerk in the operating department of the Missouri Pacific. He was employed as a clerk in the office of the claim agent of the St. Louis Southwestern in June, 1896, and in May of the following year was promoted to claim agent. Mr. Calhoun was appointed chief clerk to the division superintendent on the Kansas City Southern in April, 1899, and in June of that year was promoted to claim agent. In March, 1903, he was appointed chief clerk to the general storekeeper of the Denver & Rio Grande, and he held this position until March, 1905, when he was appointed chief clerk to the general manager of the Cincinnati, Hamilton & Dayton, now a part of the Baltimore & Ohio. Mr. Calhoun re-entered the service of the Kansas City Southern in June, 1905, as chief clerk to the president. He was promoted to assistant to the president in August, 1910, and continued in that position until his recent election as vice-president and assistant to the president.

Financial, Legal and Accounting

G. H. Muckley has been appointed assistant general attorney of the Southern Pacific, with headquarters at New York.

J. W. Orr and **John Hurst** have been appointed assistant comptrollers of the Long Island, both with headquarters at Philadelphia, Pa.

Purchasing and Stores

F. J. Berck, general purchasing agent of the Chicago & North Western, with headquarters at Chicago, has also been appointed general purchasing agent of the Chicago, St. Paul,

Minneapolis & Omaha, with the same headquarters, a newly created position.

G. A. J. Carr, assistant district storekeeper on the Chicago, Milwaukee & St. Paul, with headquarters at Minneapolis, Minn., has been promoted to district storekeeper, with headquarters at Deer Lodge, Mont., succeeding **J. V. Miller,** who has resigned. **H. R. Toohey,** chief clerk to the general storekeeper at Milwaukee, Wis., has been promoted to assistant district storekeeper at Minneapolis, succeeding Mr. Carr. **George Sheridan** has been appointed division storekeeper, with headquarters at Mobridge, S. D., succeeding **D. H. Phebus,** promoted.

Operating

T. W. Cheatham, whose promotion to superintendent of the Central Kansas and Colorado division of the Missouri Pacific, with headquarters at Osawatomie, Kan., was reported in the *Railway Age* of May 31, was born on February 28, 1878, at De Soto, Mo. He entered railway service in May, 1896, as a telegraph operator on the Missouri Pacific. After several years in this position Mr. Cheatham was promoted to train dispatcher and subsequently was promoted to chief train dispatcher. He was later promoted to train master of the Eastern division, with headquarters at Jefferson City, Mo., and after remaining in this position for several years, he was promoted to assistant division superintendent. Mr. Cheatham continued to serve as assistant division superintendent until his recent promotion to superintendent of the Central Kansas and Colorado division, with headquarters at Osawatomie, Kan.

T. W. Cheatham

J. W. Rea, whose promotion to superintendent of the Missouri division of the Missouri Pacific, with headquarters at Poplar Bluff, Mo., was reported in the *Railway Age* of May 31, was born on April 9, 1879, at Wesson, Miss. He entered railway service in January, 1905, as a brakeman on the Illinois Central and in October of the following year, was appointed conductor on the Yazoo & Mississippi Valley. In October, 1907, he was promoted to engine foreman and yardmaster and he held this position until September, 1911, when he was again appointed freight conductor. Mr. Rea was promoted to trainmaster of the Memphis division in November, 1915, and he continued in this capacity until November, 1923, when he entered the service of the Missouri Pacific as inspector of transportation. He was promoted to acting superintendent of the Eastern division in January, 1924, and remained in that position until his recent promotion to superintendent of the Missouri division.

J. W. Rea

F. E. Gerrish has been appointed superintendent of the Dakota division of the Great Northern, with headquarters at Grand Forks, N. D.

G. O. Brophy, hitherto on the staff of the general counsel of the Union Pacific, has been reappointed superintendent of the Kansas division, with headquarters at Kansas City, Mo., succeeding **P. Groome,** acting superintendent.

W. F. Kirk, whose promotion to general superintendent of the Western district of the Missouri Pacific, with headquarters at Kansas City, Mo., was reported in the *Railway Age* of May 31, was born on August 19, 1881, at Osage City, Kan. He entered railway service in November, 1897, as a messenger on the Atchison, Topeka & Santa Fe and in November, 1899, was employed in a similar capacity with the Wells-Fargo Express Company. He was appointed telegrapher on the Pecos Valley Southern in February, 1900, and in June of that year, was promoted to train dispatcher. Mr. Kirk was appointed train dispatcher on the Michigan Central in December, 1900. In April of the following year he entered the service of the Missouri Pacific as a telegrapher. He was promoted to train dispatcher in January, 1902, and later was consecutively promoted to chief dispatcher, trainmaster, assistant superintendent and assistant to the general superintendent of transportation. Mr. Kirk was promoted to acting superintendent of the Wichita division in December, 1917, and in March of the following year, he was promoted to superintendent of the Central division. He was later transferred to the Omaha division and then to the Central Kansas and Colorado division, where he remained until his recent promotion to general superintendent of the Western district.

W. F. Kirk

Traffic

P. E. Shepard has been appointed commercial agent of the Seaboard Air Line, at Tallahassee, Fla.

W. E. Johnson has been appointed general agent of the Salt Lake & Utah, with headquarters at Chicago.

J. S. Mahoney has been appointed general agent of the Lehigh Valley, with headquarters at Seattle, Wash.

J. F. Gavin, traffic manager of the Alabama, Tennessee & Northern, with headquarters at Mobile, Ala., has resigned.

G. Ruhr has been appointed general agent of the Southern Pacific, with headquarters at Hamburg, Germany, succeeding R. Falck, retired.

S. J. Llanos has been appointed assistant general freight agent of the National Railways of Mexico, with headquarters at Mexico City, Mex.

Paul Junkin, who has been on leave of absence on account of illness, has resumed his duties as district passenger agent for the Texas & Pacific, with headquarters at Dallas, Tex.

J. B. Baker has been appointed superintendent of stock yards of the Chicago, Rock Island & Pacific, with headquarters at Kansas City, Mo., a newly created position. He will report to the general livestock agent.

A. C. Ater, traveling passenger agent for the Gulf, Colorado & Santa Fe, with headquarters at Houston, Tex., has been

promoted to division passenger agent, with headquarters at Dallas, Tex., succeeding **C. L. Holland,** deceased.

J. A. Cleveland has been appointed general agent for the Erie, with headquarters at Jamestown, N. Y., succeeding E. W. Batchelder, deceased. **C. T. Gustafson** has been appointed commercial agent, with headquarters at Jamestown.

E. R. Taff, general agent for the Tennessee Railroad, with headquarters at St. Louis, Mo., has been promoted to the newly created position of general western agent, in charge of all traffic solicitation west of the Mississippi river, with the same headquarters.

F. H. Pitman, division freight agent of the Norfolk & Western, with headquarters at Roanoke, Va., has been promoted to assistant general freight agent, with the same headquarters. **A. C. Dunlap** has been appointed division freight agent, with headquarters at Roanoke, succeeding Mr. Pitman.

J. Sidman Selby, district passenger agent of the Reading Company, with headquarters at Atlantic City, N. J., has been appointed assistant general passenger agent, with headquarters at Philadelphia, Pa., succeeding George F. Ingram, resigned. **John F. Buch,** chief rate clerk, has been appointed district passenger agent, with headquarters at Atlantic City, succeeding Mr. Selby. In August, 1907, Mr. Selby entered the service of the Reading Company as a stenographer to the passenger advertising agent. He consecutively served in the position of stenographer to the district passenger agent at Philadelphia, secretary to the general passenger agent, special train clerk and manager of the Military Bureau during the war. In January, 1920, he was appointed district passenger agent at Atlantic City, which position he was holding at the time of his recent promotion.

J. S. Selby

H. L. Cook, commercial agent of the Winston-Salem Southbound at Winston-Salem, N. C., has been transferred to High Point, N. C. This change in headquarters is in connection with the opening of the High Point, Thomasville & Denton, the operation of which had been temporarily suspended.

J. W. Stevenson, commercial agent for the Chicago, Milwaukee & St. Paul, with headquarters at Minneapolis, Minn., has been promoted to division freight and passenger agent, with headquarters at Tacoma, Wash. **H. L. McLaughlin** has been appointed commercial agent at Minneapolis, succeeding Mr. Stevenson.

R. J. Wood, chief clerk to the freight traffic manager of the Northwestern region of the Pennsylvania, with headquarters at Chicago, has been promoted to district freight representative, with the same headquarters, succeeding **G. A. Hill,** who has been promoted to division freight agent, with headquarters at Ft. Wayne, Ind.

C. E. Norris, commercial agent of the Chicago & Alton, with headquarters at Indianapolis, Ind., has been promoted to general agent, with headquarters at Kansas City, Mo., succeeding O. P. Bennett, whose death on April 22 was reported in the *Railway Age* of May 3. **Barth Riedy,** commercial agent, with headquarters at Cincinnati, O., has been transferred to Indianapolis, Ind., succeeding Mr. Norris. **William Randall,** freight traffic agent, with headquarters at Peoria, Ill., has been promoted to commercial agent at Cincinnati, succeeding Mr. Riedy.

Obituary

F. M. Olyphant, secretary of the Delaware & Hudson, with headquarters at New York, died on June 17 of heart disease at his home in Englewood, N. J., at the age of 67.

W. F. Ingram, assistant treasurer of the Southern Pacific, with headquarters at San Francisco, Cal., died in that city on June 10. Mr. Ingram was elected president of the Railway Treasury Officers' Association in 1923.

Don R. Patterson, manager of coal traffic of the Chicago & Eastern Illinois, with headquarters at Chicago, died in that city on June 11. Mr. Patterson was born at Washington Court House, O., on April 4, 1856, and entered railway service in November, 1871, as a clerk in the office of the Chicago & Eastern Illinois. He was successively promoted to various positions, including assistant general manager and general superintendent. Mr. Patterson was appointed manager of coal traffic, including the distribution of coal equipment to the mines, in 1892, and he remained in that position until his death. He was the oldest official in point of continuous service on the Chicago & Eastern Illinois, having served that company continuously for 53 years.

Arthur B. Corthell, chief engineer of the Boston & Maine, with headquarters at Boston, Mass., died on May 24, at the age of 64. He was born on July 3, 1860, at Whitman, Mass., and was graduated from Brown University, Providence, R. I., in 1881. Mr. Corthell entered railway service in September, 1881, as assistant engineer of the New York, West Shore & Buffalo (now the West Shore) and in December, 1883, he was appointed supervisor, remaining in that capacity for a few months, when he was appointed division engineer. For two years he was civil engineer for the Knickerbocker Ice Company at New York and in April, 1886, returned to the New York, West Shore & Buffalo as draftsman, remaining in that capacity until September, of the same year, when he entered the service of the Fitzgerald & Mallory Construction Company as assistant engineer. In July, 1887, he was appointed first assistant engineer on the construction of the Sioux City bridge over the Missouri river and in March, of the following year, he was appointed assistant engineer on the construction of the Thames river bridge. He was appointed assistant engineer of the New York, Providence & Boston (now New York, New Haven & Hartford) in September, 1889, and in March, 1892, he was appointed first assistant engineer of the Providence passenger station and approaches. In January, 1897, he was appointed principal assistant engineer on construction of the South Station for the Boston Terminal Company at Boston, Mass., and in December, 1899, he went with the Westinghouse, Church, Kerr & Co., Boston. In February, 1900, Mr. Corthell was appointed resident engineer of the Boston Terminal Company and in February, 1902, he was appointed terminal engineer of the New York Central & Hudson River (now New York Central) at New York. He was appointed assistant executive of the Grand Central Station architects at New York in May, 1906, and in November, 1908, he was appointed secretary and consulting engineer of the Auxiliary Facilities Committee of the Grand Central Terminal. In July, 1911, Mr. Corthell was appointed chief engineer of the Boston & Maine, the position he was holding at the time of his death.

ENGINEMEN of the Chicago, Milwaukee & St. Paul who exceed the speed limit of 10 miles an hour over grade crossings in Maytair, Chicago, will be summoned as speeders if the city carries out plans announced on June 16. This action was decided upon as retaliation for the failure of the St. Paul to begin the elevation of its tracks at Mayfair. The road agreed to track elevation several years ago but has been unable to carry it out on account of financial inability.

DURING the year 1923 the total operating revenues of express companies in Canada, excluding the Canadian National Express Company, was $14,205,992, the total operating expenses were $6,813,309. The operating revenues of the Canadian National Express Company (the express department of the government-owned system) totaled $12,726,614 and the operating expenses were $6,404,470. The operating revenues of the American Railway Express from operation in Canada totaled $2,245,253, and the total operating expenses $598,571.